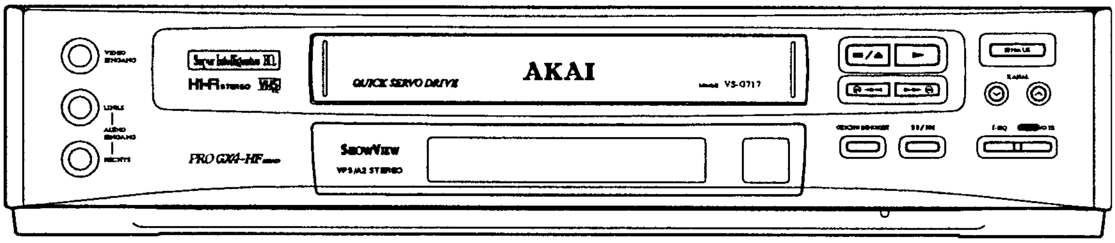
VS-G705
VS-G711, G712
VS-G715, G717

AKAI SERVICE MANUAL


AKAI
QUICK SERVO DRIVE
VS-G717
HI-FI STEREO
PRO GX4-HF
SHOWVIEW
VPS/A2 STEREO

MODEL VS-G717EOG-D

HQ HIGH QUALITY VHS PAL Hi·Fi

SHOWVIEW

VIDEOPlus+

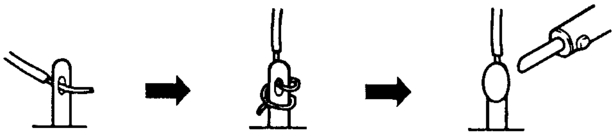
VIDEO CASSETTE RECORDER

MODEL VS-G705 EA-D/EOH·D
MODEL VS-G711 EDG
MODEL VS-G712 EOG-D
MODEL VS-G715 EK-N/EO-D/ EOH-DN/EOH-N
MODEL VS-G717 EOG-D

★ SAFETY INSTRUCTIONS —

PRECAUTIONS DURING SERVICING

1. Parts identified by the ⚠ (*) symbol are critical for safety. Replace them only with the parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation. These must also be replaced only with the specified replacements.
   Examples: RF converters, tuner units, antenna selector switches, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads
4. Use specified insulating materials for hazardous live parts.
   Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers (insulating barriers)
   4) Insulation sheets for transistors
   5) Plastic screws for fixing micro switches
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap the ends of the wires securely around the terminals before soldering.

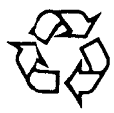


6. Make sure that wires do not contact heat producing parts (heat sinks, oxide metal film resistors, fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locations.
9. Make sure that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

SAFETY CHECK AFTER SERVICING

After servicing, make measurements of leakage-current or resistance in order to determine that exposed parts are acceptably insulated from the supply circuit.
The leakage-current measurement should be done between accessible metal parts (such as chassis, ground terminal, microphone jacks, signal input/output connectors, etc.) and the earth ground through a resistor of 1500 ohms paralleled with a 0.15 μF capacitor, under the unit's normal working conditions.
The leakage-current should be less than 0.5 mA rms AC.
The resistance measurement should be done between accessible exposed metal parts and power cord plug prongs with the power switch (if included) "ON". The resistance should be more than 2.2 M Ohms.

MAKE YOUR CONTRIBUTION TO PROTECT THE ENVIRONMENT



Used batteries with the ISO symbol for recycling as well as small accumulators (rechargeable batteries), mini-batteries (cells) and starter batteries should not be thrown into the garbage can.
Please leave them at an appropriate depot.

★ SPECIFICATIONS

Format	
EA-D	VHS standard
Except EA-D	VHS standard (PAL, MESECAM)
Video recording system	Rotary, slant azimuth two-head helical scan system
Rotary heads	4 video heads & 2 audio heads
RF input	
EA-D	System B, G VHF ch 0 - 5, 5A, 6 - 11, UHF ch 21 - 69
EDG	System D, K VHF ch 1 - 12, UHF ch 21 - 69 System B, G VHF ch 2 - 12, UHF ch 21 - 69 Cable ch S1' - S3', S1 - S41
EK-N	System I UHF ch 21 - 69
EO-D	System B, G (PAL, SECAM) VHF ch 2 - 4, 5 - 12, UHF ch 21 - 69 Cable ch S1' -S3', S1 - S20
EOG-D/EOH-D/ EOH-DN/EOH-N	System B, G (PAL, SECAM) VHF ch 2 - 4, 5 - 12, UHF ch 21 - 69 Cable ch S1' - S3', S1 - S41
Stereo system	
EA-D/EOG-D/EOH-D	German sound multiplex (A2)
EK-N	NICAM-I (U.K. NICAM)
EOH-N	B/G NICAM
EOH-DN	B/G NICAM and German sound multiplex (A2)
RF output	
EA-D	System B type modulation VHF ch 0, 1 switchable (preset ch 1)
EDG	System K/G type modulation UHF ch 30 - 39 adjustable (preset ch 36)
EK-N	System I type modulation UHF ch 30 - 39 adjustable (preset ch 36)
EO-D/EOG-D/EOH-D/ EOH-DN/EOH-N	System G type modulation UHF ch 30 - 39 adjustable (preset ch 36)
Recording (line input)	
EA-D/EK-N	PAL
Except EA-D/EK-N	PAL, SECAM (recorded as MESECAM)
Playback (line output)	
EA-D/EK-N	PAL
EO-D/EOG-D/EOH-D/ EOH-DN/EOH-N	PAL, SECAM (MESECAM Tape)
EDG	PAL, SECAM (MESECAM Tape) NTSC 4.43 (NTSC Tape) Simulated PAL (NTSC Tape)
Video	
Line input level	0.5 - 2.0 Vp-p/75 ohms, unbalanced
Line output level	1.0 Vp-p/75 ohms, unbalanced
S/N ratio	More than 45 dB
Horizontal resolution	More than 250 lines

Audio	(VHS Hi-Fi : 2 ch, Linear : 1 ch)
Line input level	–6 dBs/50 k ohms, unbalanced
Line output level	–6 dBs/1 k ohms, unbalanced
Dynamic range	More than 90 dB (VHS Hi-Fi)
Frequency response	20 - 20,000 Hz (VHS Hi-Fi)
Wow & Flutter	Less than 0.005 % WRMS (VHS Hi-Fi)
Recording/playback time	
SP mode	240 min. with E-240 cassette
LP mode	480 min. with E-240 cassette
(EDG only)	
CCIR SP mode	240 min. with E-240 cassette
LP mode	480 min. with E-240 cassette
NTSC (Playback only)	
SP mode	160 min. with T-160 cassette on
EP mode	480 min. with T-160 cassette on
Tape speed	
SP mode	23.39 mm/sec
LP mode	11.695 mm/sec
(EDG only)	
CCIR SP mode	23.39 mm/sec.
LP mode	11.695 mm/sec.
NTSC SP mode	33.35 mm/sec
EP mode	11.12 mm/sec
Quick finder	
SP mode	Approx. 7 times normal speed
LP mode	Approx. 7 times normal speed
(EDG only)	
CCIR SP mode	Approx. 7 times normal speed
LP mode	Approx. 7 times normal speed
NTSC SP mode	Approx. 5 times normal speed
EP mode	Approx. 5 times normal speed
FF, REW time	Approx. 2.0 min. with E-180 cassette
Timer	
Program	8 programs/1 year and OTR
Clock reference	Quartz crystal
Display	TV screen & FLD (Tapecounter, Timer, etc.)
Power requirements	
EA-D	240 V AC, 50 Hz
EDG	220 V AC, 50 Hz
EK-N	230 - 240 V AC, 50 Hz
EO-D/EOG-D/EOH-D/ EOH-DN/EOH-N	220 - 230 V AC, 50 Hz
Power consumption	
EA-D	21 W
EDG/EO-D	22 W
EK-N/EOG-D/EOH-N	24 W
EOH-D	23 W
EOH-DN	25 W
Operating temperature	5°C - 40°C
Dimensions	425 (W) x 90 (H) x 276 (D) mm
Weight	4.5 kg

Standard accessories

AC cord	1
Antenna cable	1
Remote control unit	1
Batteries for remote control	2 or 3
Operator's manual	1

0 dBs = 0.775 V

∗ For improvement purposes, specifications and design are subject to change without notice.

∗ VIDEO PLUS + AND PLUSCODE ARE TRADEMARKS OF GEMSTAR DEVELOPMENT CORP. VIDEO PLUS + SYSTEM IS MANU-FACTURED UNDER LICENCE FROM GEMSTAR DEVELOPMENT CORPORATION.

∗ SHOWVIEW IS A TRADEMARK APPLIED FOR BY GEMSTAR DEVELOPMENT CORP. SHOWVIEW SYSTEM IS MANUFACTURED UNDER LICENCE FROM GEMSTAR DEVELOPMENT CORPORATION.

★ INFORMATION

SYMBOLS FOR PRIMARY DESTINATION

Unit destinations are indicated with letters as shown below.

Symbol	Power Classification	Primary destination	TV System	
			Color	Broadcast
EA	S	Australia	PAL	B, G
ED	E	China	PAL	D
EDG	E	East Europe	PAL	D, K
EDI	E	China, Hong Kong	PAL	D, K, I
EG	E	Spain, Northern Europe, Other	PAL	B, G
	Y7	Saudi Arabia		
EK	B	U.K.	PAL	I
	Y1	Hong kong		
EM	E	Middle East	PAL	B, G
	Y7	Saudi Arabia		
EO	E	Holland, Switzerland, Northern Europe	PAL	B, G
	V	Italy		
EOH	E	Holland, Belgium	PAL	B, G
	V	Italy		
EOG	V	Germany	PAL	B, G
ES	E	South Africa, Ireland, Hong kong	PAL	I
EV	E	South-East Asia	PAL	B, G
	U	Middle East, South-East Asia		
	Y1	New Zealand		
	Y7	Saudi Arabia		
EZ	S	New Zealand	PAL	B, G
EGN	E	Middle East	PAL, NTSC	B, G
	Y7	Saudi Arabia		
S	E	France	SECAM	L
SK	E	Latin America, Oceania, SECAM-OIRT	SECAM	K, K1
SEG	E	France, Switzerland	SECAM, PAL	L, B, G
U	A	U.S.A.	NTSC	M
	C	Canada		
UM	U	Latin America	NTSC	M
J	J	Japan	NTSC	M

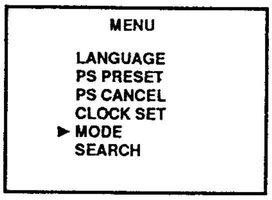
MULTI FUNCTION MENU MODE

This is an on-screen display of the various modes you can programme via the TV screen.

LANGUAGE	To select a language for the on-screen displays.
PS PRESET	To preset TV stations.
PS CANCEL	To cancel preset TV stations.
CLOCK SET	To set the clock.
MODE	To select the SPEED (tape speed), BSP (blank skip play), OSD (on screen display), AV MUTE, SYST.(colour system), TV/VCR, DIMMER (FLD brightness) and AUTO OFF modes.
✻ NOTE	SYST. selection is not available on some models.
SEARCH	To select the BLANK SEARCH and INTRO SCAN modes.
PDC SET	To set the PDC mode on or off.
VPS SET	To set the VPS mode on or off.
VPT SET	To set the VPT function.
✻ NOTE	PDC SET or VPS SET function is only available on EK-N, EOH-DN (Y1) and EOG-D models.

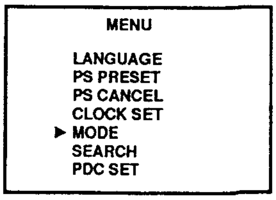
If necessary, refer to the respective sections in the operator's manual for detailed information.

1. Press the "MENU" button on the remote control unit. The menu list screen will be displayed on the TV screen.


MENU

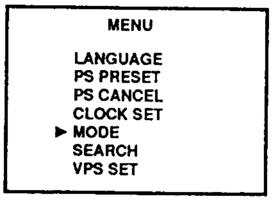
LANGUAGE
PS PRESET
PS CANCEL
CLOCK SET
► MODE
SEARCH

EA-D/EDG/EO-D/EOH-D/
EOH-N/EOH-DN (Y2) only


MENU

LANGUAGE
PS PRESET
PS CANCEL
CLOCK SET
► MODE
SEARCH
PDC SET

EK-N/EOH-DN (Y1) only


MENU

LANGUAGE
PS PRESET
PS CANCEL
CLOCK SET
► MODE
SEARCH
VPS SET

EOG-D only

2. Select the desired menu by setting the arrow indicator to the appropriate position with the cursor "⋀" or "⋁" button.
   The arrow indicator moves upwards each time when the "⋀" cursor button is pressed. Pressing the "⋁" cursor button will move the arrow indicator downwards.
3. Press the "OK" button.
   The selected menu screen will be displayed on the TV screen.
4. Select the desired mode (or function) by setting the arrow indicator to the appropriate position with the cursor "⋁" or "⋀" button. The number of the modes (or functions) depends on the sort of the menu.
5. Set the each mode (or function) by pressing the "⋁" or "⋀" cursor button and ">" or "<" cursor button.
6. Press the "OK" button.
   The selected menu screen will be disappeared few seconds after the "OK" button is pressed. This means the setting has been completed correctly.

MANUAL TRACKING/PICTURE/STABILITY ADJUSTMENT

Using the remote control, the VCR can be adjusted for tracking and picture sharpness anytime during the playback mode.

- Manual tracking control
  Press the "<" or ">" cursor button repeatedly until the picture is clear. During manual tracking adjustment, the tracking position is shown on the TV screen, and disappears automatically after adjustment has been completed. Use this function when performing the A/C HEAD phase adjustment.
- Picture sharpness control
  Press the "⋀" button repeatedly to sharpen the picture or press the "⋁" button to soften the picture.
- Stability adjustment

1) To correct picture shake during the slow motion or still mode:
   Press the "⋀" or "⋁" cursor button repeatedly until the picture shake is corrected.
2) To correct tracking during the still mode:
   Press the "<" or ">" cursor button repeatedly until the picture is clear.

ERROR ANNOUNCEMENT

When a malfunction occurs, the following error indicators appear on the FL display to indicate the problem when the power is turned off.

Err 1 = AL power supply has short circuited.
Err 2 = The loading motor has been stopped irregularly. (When the mechanism position detect switch is not able to read the specified code, that is to say not able to reach to the specified position within the specified time.)
Err 3 = The drum motor has been stopped. (When the drum motor does not rotate due to condensation, etc.)
Err 5 = The capstan motor has been stopped. (When the capstan motor does not rotate.)

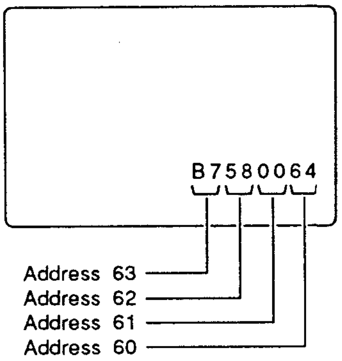
PRESETS IN THE TEST MODE

1) Engaging the "TEST MODE"

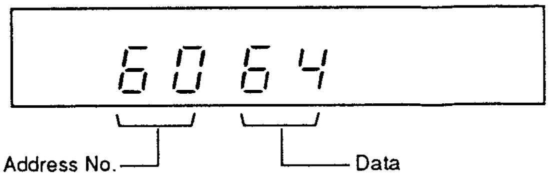
To set the VCR to the TEST MODE, press the "reset" button on the front panel first then plug in the AC power cord while pressing and holding both the "POWER" and "STOP/EJECT" buttons on the front at the same time. Next, release your fingers from both the buttons a few seconds later and press the "POWER" button.

2) Version code preset

1. Engage the "test mode". The version (model) code will be displayed on the lower right part of the screen in 8 digit form.



2. While pressing both the "FF" and "RWD" buttons, press the "RESET" button. The address and its data will be shown in the FL display. (Keep pressing the "FF" and "RWD" buttons until version code apppears.)



3. Select the address "60" by pressing the "FF" or "RWD" button.
4. Choose the data in the address 60 column that corresponds to the model number you are working on from the following list. Set the chosen data value by pressing the "STOP" or "PLAY" button.

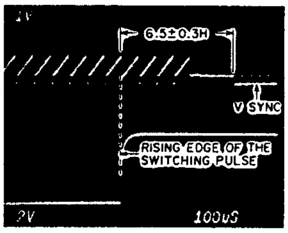
5. Memorize the data into the EEP ROM IC by pressing the "REC" button.
6. The address "61" and its data will be shown in the FL display. Repeat the presetting (steps 4 to 5) for addresses "61", "62" and "63" in the same manner as address "60".
7. Press the "RESET" button to disengage the version (model) code preset mode.

MODEL	MODEL CODE	ADDRESS			
		60 (h)	61 (h)	62 (h)	63 (h)
VS-G705EA-D	34420024	24	00	42	34
VS-G705EOH-D(Y1)	34590064	64	00	59	34
VS-G711EDG	365001A4	A4	01	50	36
VS-G712EOG-D	37580064	64	00	58	37
VS-G715EK-N	B4548024	24	80	54	b4
VS-G715EO-D	B4500064	64	00	50	b4
VS-G715EOH-DN (Y1)	B4598064	64	80	59	b4
VS-G715EOH-DN (Y2)	B4590064	64	00	59	b4
VS-G715EOH-N (E)	B4590064	64	00	59	b4
VS-G717EOG-D	B7580064	64	00	58	b7

NOTE :This version code preset is absolutely necessary when the IC402 (EEP-ROM) on the MAIN PCB is replaced.

3) Video switching point preset

1. Engage the "test mode".
2. Connect CH-1 of an oscilloscope to VIDEO OUT and CH-2 to the TP2 (V-SWP) on the PRE AMP & Hi-Fi PCB for triggering.
3. Play back the reference tape TF-530RFS (AT-751775) and press the "REC" button during playback.
4. Confirm that the switching point is positioned 6.5 ± 0.3 H before the left edge of the V-sync as shown.



NOTE:

This switching point preset is absolutely necessary when conditions are as follows.

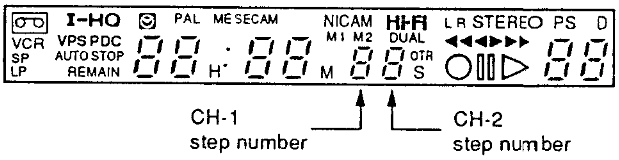
- When the video head drum (upper drum) is replaced.
- When the DRUM MOTOR PCB or DRUM MOTOR's ROTARY MAGNET (ROTARY PLATE) is replaced.
- When the SERVO/SYSCON MI-COM or EEP ROM IC (IC402) on the MAIN PCB is replaced.

4) Y REC current preset

Although the optimum Y REC current is determined each time when the I-HQ tape tuning system is operated, however centre value of the variable range should be memorized in the micro computer.

If the IC1 (AN3386NK) in the PRE AMP & Hi-Fi PCB or whole PRE AMP & Hi-Fi PCB is replaced, following preset must be performed for the proper performance.

1. Engage the test mode.
2. Set the tape speed to the "LP" mode.
3. Previously memorized step value will be appeared in the FL display in the position shown below. The CH-1's step value is displayed in the left side and the CH-2's step value is right side.

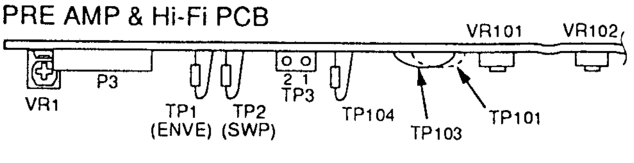


4. If the left one is not the same as right one, choose the CH-1's or CH-2's whichever the step value is larger.
5. Select the REC current voltage from the following list that is corresponded to the step value which you have choosen in step 3.

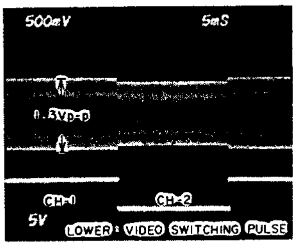
Step No. (value)	V REC VOLUME DC level	Y REC current level
0	4.5 V	0.68 Vp-p
1	4.0 V	0.82 Vp-p
2	3.5 V	1.00 Vp-p
3	3.0 V	1.15 Vp-p
4	2.5 V	1.30 Vp-p
5	2.0 V	1.45 Vp-p
6	1.5 V	1.60 Vp-p
7	1.0 V	1.75 Vp-p

6. Connect the CH-1 of an oscilloscope to the TP3 ① pin (REC CURRENT CHECK) on the PRE AMP & Hi-Fi PCB and the CH-2 to the TP2 (SWP) for triggering.

PRE AMP & Hi-Fi PCB



7. Insert a blank tape and start a recording. Adjust the VR1 on the PRE AMP & Hi-Fi PCB so that the Y REC CURRENT is the same value as choosen from the list. The switching pulse's "H" level period corresponds to CH-1 and "L" period corresponds to CH-2.



Example of CH-1 side, step No.4

8. Next, insert the I-HQ test tape "TF-556AT" (AT-751822J) and then perform tape tuning in order to memorize the data by pressing both the "I-HQ" and "REC" buttons simultenuously.
9. After this preset has been completed, proceed to next 5) "Memorization of the reference RF envelope detect voltage". Steps 4 to 6 should be performed before terminate the test mode.

5) Memorization of the reference RF envelope detect voltage (I-HQ)

For the purpose of the correct operation of the I-HQ tape tuning system, memorization of the reference RF envelope detect voltage is absolutely necessary. When the VIDEO HEAD DRUM, PRE AMP PCB or EEP ROM IC in the MAIN PCB is replaced for any reason, memorize the reference RF envelope detect voltage according to the following procedure.

1. Engage the test mode.
2. Set the tape speed to "LP mode".
3. Insert the I-HQ test tape "TF-556AT" (AT-751822J) and then perform tape tuning by pressing both the "I-HQ" and "REC" buttons simultenuously.
4. Make a recording on the I-HQ test tape for more than 1 minute and then rewind it to the point where the recording was started.
5. Play back the tape. Reference RF envelope detect voltage data in the memory is displayed in 2 digits in the hours display part of the FL display and the present envelope detect voltage data is displayed in 2 digits in the minutes display part (the data is displayed in hexadecimal numbers).
6. After the auto tracking has been activated, press the "CANCEL" button on the remote control unit. So present RF envelope detect voltage data will be transferred to the hours part's 2 digits and memorized in the EEP ROM IC.
7. Next, set the tape speed to "SP mode" and repeat the steps 3 to 5.
8. Terminate the test mode.

6) Other facilities in the test mode

1. Tracking position display

In the "SP play" mode, tracking position data can be displayed on the FL display. Data is displayed in 64 steps in hexadecimal numbers from "00" to "3F" in the seconds display part on the FL display. Pressing the "TV/VCR" button on the remote control unit during playback directly sets the tracking to the maximum "3F" position and pressing the "COUNTER RESET" button sets it to the minimum "00" position.

Pressing the "PLAY" button during playback sets tracking to the center position "1F" automatically. If "1F" does not appear even when the "PLAY" button is pressed, keep pressing the "<" or ">" cursor button on the remote control unit until "1F" is indicated and then press the "OK" button to memorize the position.

2. TIMER function confirmation

During the "test mode", the clock's minute part is advanced by a second when the power is turned off. This means that the "timer" function can be confirmed in a short time.

3. Suspension of the tape protection system

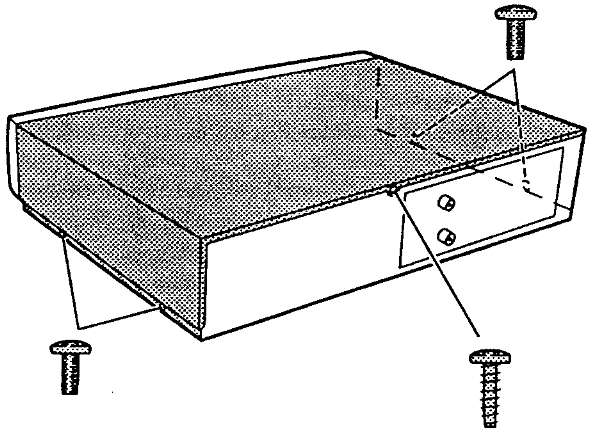
When the VCR is not in the "test mode", the "REC PAUSE" mode will be released after 30 minutes in order to protect the tape. The "STILL" mode will also be released after 5 minutes. During the "test mode", however this tape protection system will not operate.

※ Video head rotation will stop 5 min. after the "REC PAUSE" mode has been engaged even during the test mode.

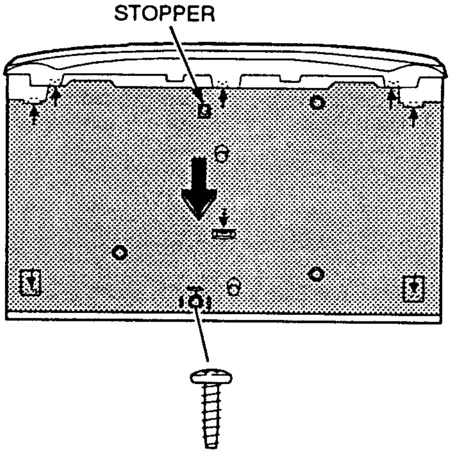
I. DISASSEMBLY

In case of trouble, etc., necessitating dismantling, please dismantle in the order shown in the illustrations. Reassemble in the reverse order.
When reattaching the FRONT PANEL, hold the cassette loading slot door in the upright (open) position.

1. Removal of UPPER COVER

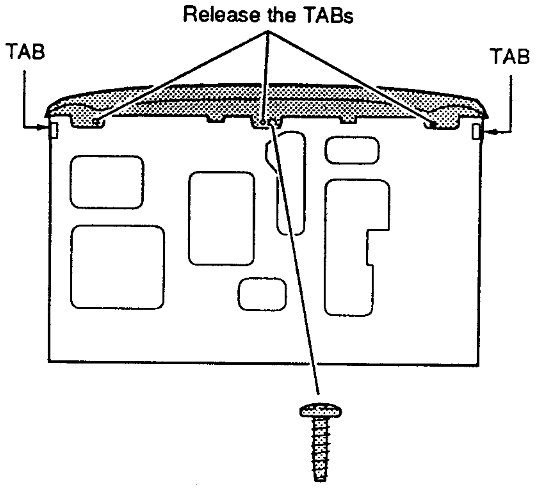


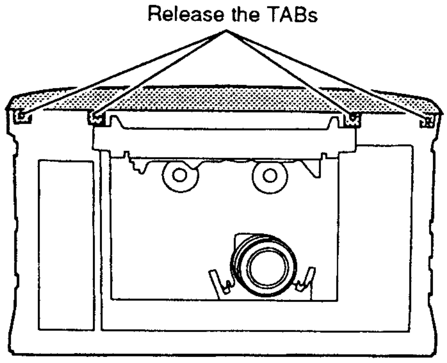
2. Removal of BOTTOM COVER



While pressing the stopper downward, slide the Bottom cover in the direction of the arrow for removal.
When replacing the Bottom cover, make sure it is secured with the tabs.

3. Removal of FRONT PANEL





Disconnect the P143 connector on the FRONT PCB that is attached on the FRONT PANEL BLOCK or P343 connector on the IN/OUT (C) PCB.

II. PRINCIPAL PARTS LOCATION

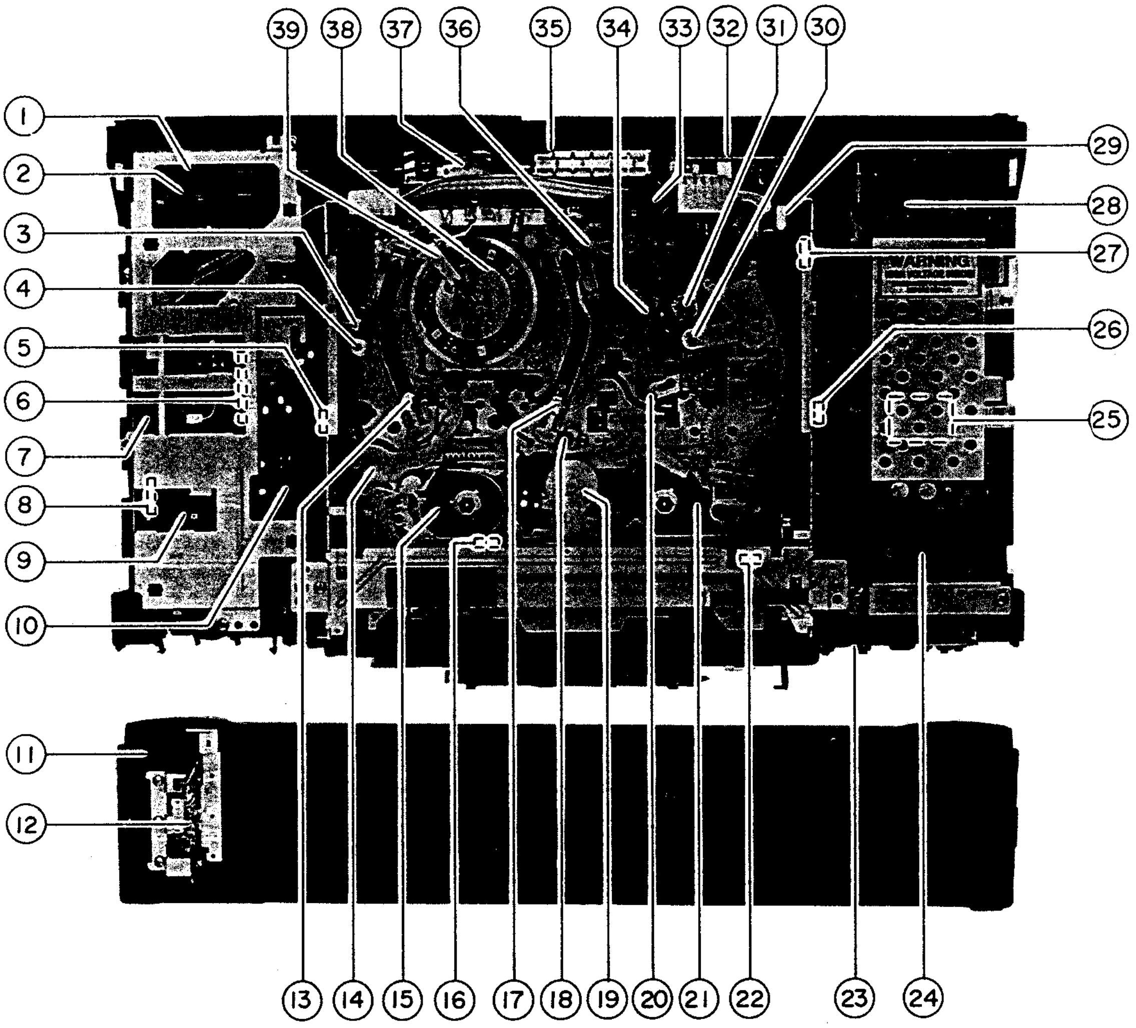


Fig. 2-1 Top view

1. IN/OUT (A) PCB
2. IN/OUT (B) PCB
3. FULL TRACK ERASE HEAD
4. SUPPLY TAPE GUIDE
5. END SENSOR
6. CDR PCB (EOG-D only)
7. IN/OUT (C) PCB
8. SECAM DET & NTSC PCB (EDG only)
9. D-MULTI PCB (EA-D, EO-D, EOG-D, EOH-D only)
   D-NICAM PCB (EK-N, EOH-N/DN only)
10. MAIN PCB
11. FRONT PANEL BLOCK
12. FRONT PCB
13. SUPPLY LOADING LEADER
14. TENSION ARM
15. SUPPLY REEL TABLE
16. REC SAFETY SWITCH
17. TAKE UP LOADING LEADER
18. SENSOR LED
19. IDLER PART
20. REVIEW ARM PART
21. TAKE UP REEL TABLE
22. S-VHS TAPE DETECT SWITCH
23. OPERATION PCB
24. TR (B) PCB
25. POWER TRANSFORMER
26. START SENSOR
27. TR (A) PCB
28. POWER SUPPLY PCB
29. OSC PCB
30. PINCH ROLLER
31. CAPSTAN MOTOR BLOCK
32. VIF UNIT
33. PRE AMP & Hi-Fi PCB
34. AUDIO CONTROL/SIDE ERASE HEAD
35. TUNER UNIT
36. HEAD CLEANER BLOCK
37. RF CONVERTER UNIT
38. VIDEO HEAD DRUM BLOCK
39. EARTH BRUSH

※ The photograph on this page is of model VS-G715EO-D.

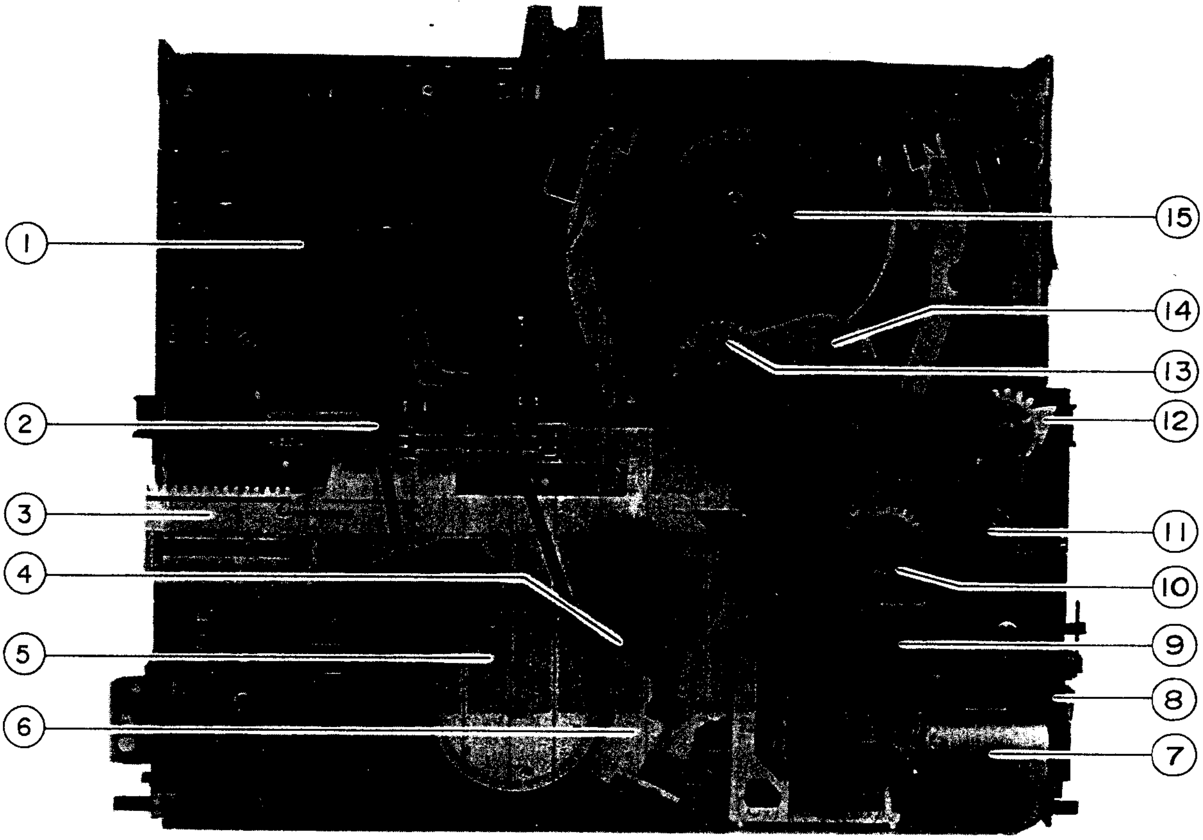


Fig. 2-2 Bottom view

1. CAPSTAN MOTOR BLOCK
2. CAPSTAN BELT
3. PINCH SLIDER
4. GEAR COUPLING BLOCK
5. CLUTCH DISK PART
6. COUPLING ARM
7. LOADING MOTOR
8. LM/MS PCB
9. LOADING DRIVE BLOCK
10. CAM SLIDER GEAR
11. MODE SELECT SWITCH
12. FRONT LOADING GEAR
13. TOGGLE (T) GEAR BLOCK
14. TOGGLE (S) GEAR BLOCK
15. DRUM MOTOR BLOCK

III. VIEWING THE OPERATION OF THE BOTTOM SIDE OF THE MECHANISM BLOCK

※ In case you want to check the operation of the bottom side of the mechanism block, proceed as follows.

3-1. REMOVAL OF THE FRONT PANEL

1) Remove the FRONT PANEL (refer to step 1-3).

3-2. REMOVAL OF THE MECHANISM BLOCK

1) Remove the three Ⓐ screws on the bottom side as shown in Fig. 3-1.

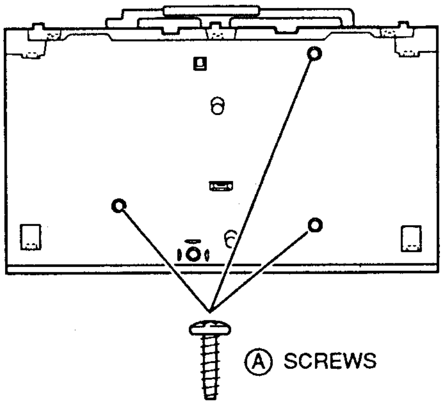


Fig. 3-1

2) Remove the two Ⓑ screws and the Ⓒ screw which retain the MECHANISM BLOCK and the EARTH PLATE as shown in Fig. 3-2.

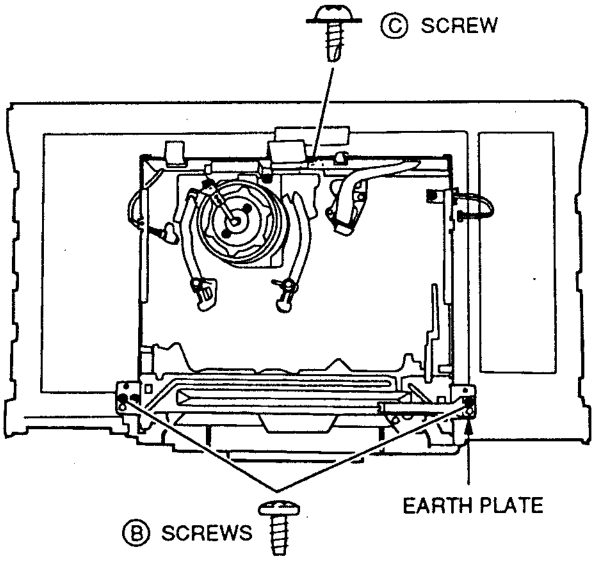


Fig. 3-2

3) Remove the MECHANISM BLOCK and place a video cassette which is no longer needed or something else that is substitutable (must be made of insulated material) on the MAIN PCB.
4) Place the MECHANISM BLOCK on the tape etc., standing it on end as shown in Fig. 3-3 with care not to damage the flat cables on the PRE AMP & Hi-Fi PCB.

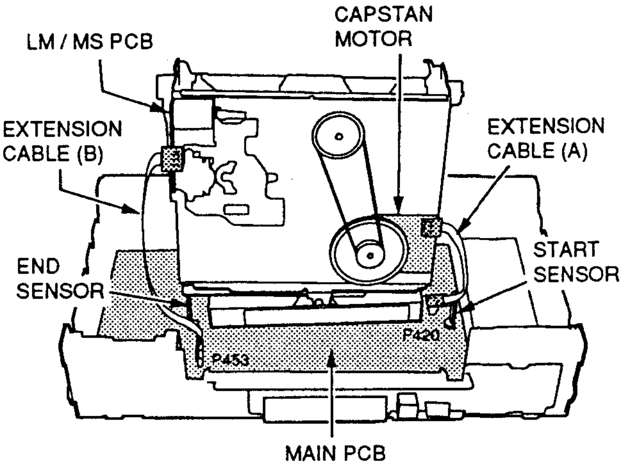


Fig. 3-3

3-3. CONNECTING THE EXTENSION CABLE

1) Connect the two extension cables (which are provided as the service jig) between the CAPSTAN MOTOR BLOCK and the P420 on the MAIN PCB, the LM/MS PCB and P453 on the MAIN PCB.

NOTE : The "FRONT" mark on the extension cable (A) PCB must be facing front when connecting.

3-4. TURNING THE POWER ON

1) Place a cover (a ball point pen's cap etc.) on the start sensor as shown in Fig. 3-3 in order to intercept the light to the sensor. The cap must be black or metal.
2) Engage the test mode (refer to in the information section, "PRESETS IN THE TEST MODE").
3) Remove the cover on the start sensor immediately after the cassette tape is inserted in the ejector so that the tape is drawn down automatically.
4) Cover both the start and end sensors at the same time with the covers right before the cassette tape reaches the lower position.
Normal playback and CUE, REVIEW modes can be operated in this condition.
5) In case you want to change the tape, eject the present tape by pressing the "EJECT" button then remove the cover on the end sensor and repeat the steps 3) to 4).

IV. DISASSEMBLY OF THE MAIN COMPONENTS

4-1. REMOVAL OF THE MECHANISM BLOCK

NOTE: Some parts in the mechanism block require complete removal of the mechanism block from the chassis when performing servicing.
Set the loading mechanism to the "EJECT" position by pressing the "EJECT" button, then disconnect the AC power plug from the AC socket before proceeding. This sets the loading mechanism to the "reference position".

4-1-1. Removal of the FRONT PANEL BLOCK

1) Remove the FRONT PANEL BLOCK (refer to step 1-3 on page 8)

4-1-2. Removal of the PRE AMP & Hi-Fi PCB

1) Detach the OSC PCB from the PRE AMP & Hi-Fi PCB by pulling it forward.

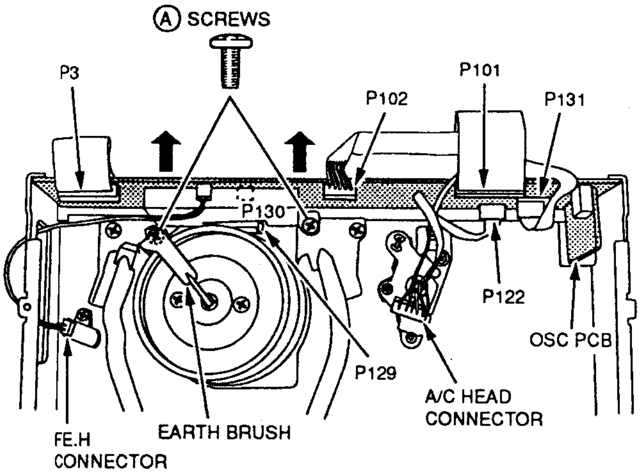


Fig. 4-1

2) Disconnect the two flat cables from the P3 and P101 connectors respectively and then disconnect the P102, P122 and P131 connectors.
3) Disconnect the connector on the A/C HEAD and FULL TRACK ERASE HEAD.
4) Remove one of the Ⓐ screw and remove the EARTH BRUSH.
5) Remove the other Ⓐ screw, then press the lower side of the shield case in the direction of the arrow as shown in Fig. 4-1.
6) Proceed in the reverse order for installation. Carefully align the connectors between the one on the DRUM MOTOR PCB, one on the LOWER DRUM and P129, P130 connectors on the PRE AMP & Hi-Fi PCB when re-attaching.
To make insertion easier, remove the two mechanism block retaining screws on the bottom as shown in Fig. 4-2 and then while pulling the back part of the mechanism block upward, connect the connectors properly.

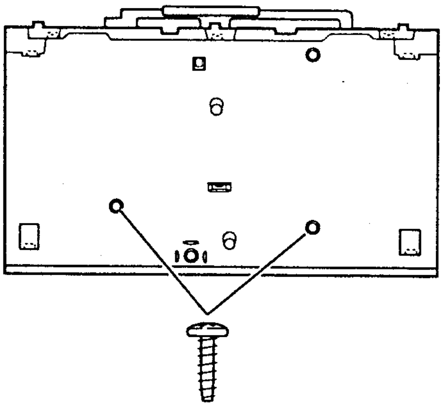


Fig. 4-2

4-1-3 Removal of the TR (A) PCB

1) Remove the Ⓑ transistor retaining screw, then remove the TR (A) PCB from the MECHANISM BLOCK.

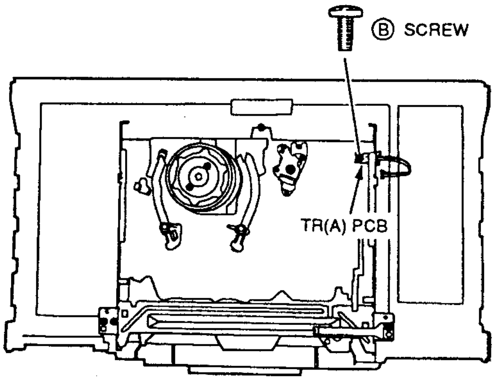


Fig. 4-3

4-1-4. Removal of the MECHANISM BLOCK

1) Remove the three retaining screws on the bottom (refer to Fig. 3-1 on page 11).
2) Remove the two Ⓓ screws and the Ⓔ screw which retain the MECHANISM BLOCK and the EARTH PLATE as shown in Fig. 4-4.

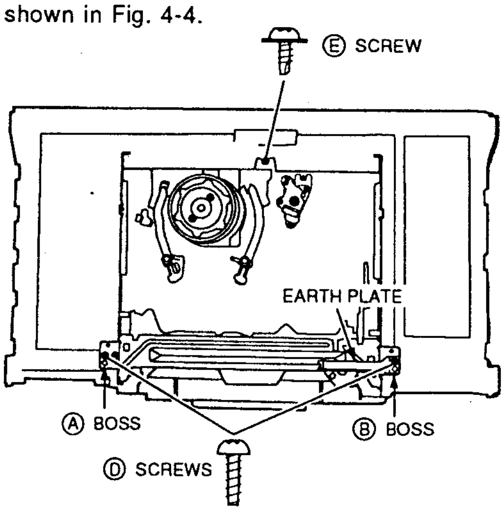


Fig. 4-4

3) Pull up the MECHANISM BLOCK carefully for detaching it from the chassis and the MAIN PCB.

4-1-5. Installation of the MECHANISM BLOCK

1) Carefully align the Ⓐ and Ⓑ bosses on the chassis with their corresponding holes on the MECHANISM BLOCK and then tighten the three screws (refer to Fig. 4-4).
2) Proceed in the reverse order of 4-1-1 to 4-1-3 for installation.

4-2. REMOVAL OF THE EJECTOR BLOCK

4-2-1. Removal of the CASSETTE LOAD BLOCK

1) Remove the two Ⓐ screws on the UPPER PLATE, as shown in Fig. 4-5 then remove the UPPER PLATE.

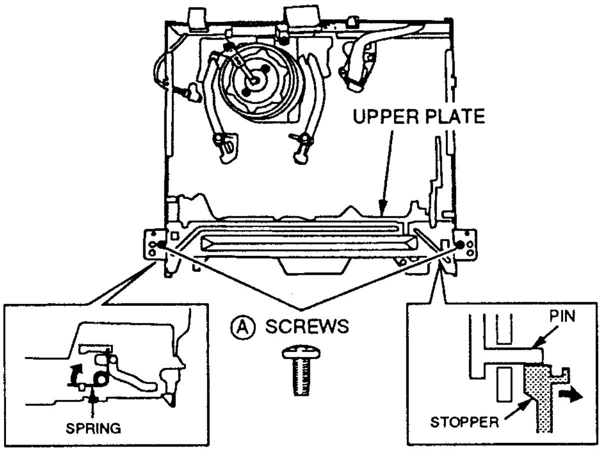


Fig. 4-5

2) Unhook the spring and remove it as shown in Fig. 4-5.
3) While pressing the right STOPPER in the direction of the arrow (refer to Fig. 4-5), gently remove the right side pin of the CASSETTE LOAD BLOCK from the rail by pulling it in the forward direction. Next, remove the left side pin in the same manner, then remove the CASSETTE LOAD BLOCK. To avoid damaging the pins of the CASSETTE LOAD BLK and the rail of the MECHA. FRAME, do not use excessive force when removing the CASSETTE LOAD BLK.

4-2-2. Removal of the LOADING ARM BLK

1) Release the stopper on the right side end of the LOADING ARM BLK's shaft (refer to Fig. 4-6) by pressing the stopper tab with a flat head (—) screwdriver. Then remove the shaft's right end from the bracket.

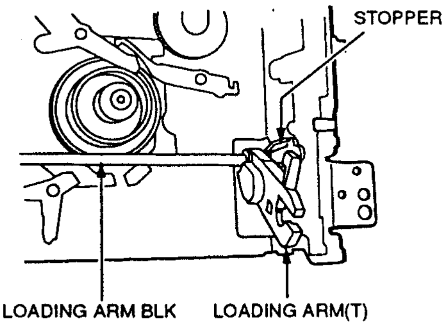


Fig. 4-6

2) Hold the LOADING ARM (T) and then pull out the shaft's left end from the bracket. Take special care when removing it to avoid damaging the pins (refer to Fig. 4-6).

4-2-3. Reassembling

1) Proceed in the reverse order of 4-2-1 to 4-2-2 for installation.

4-3. REMOVAL OF THE MODE SELECT SWITCH

Before proceeding with removal of the MODE SELECT SWITCH, the loading mechanism must be set to the "reference" position. If it has not already been set, use the following procedure to set the reference position.

※ Connect a 6V battery to the loading motor until both the cam slider gear and mode select switch reach the reference position (refer to Fig. 4-8).

4-3-1. Removal of the MODE SELECT SWITCH

1) Unsolder the 5 leads of the mode select switch.

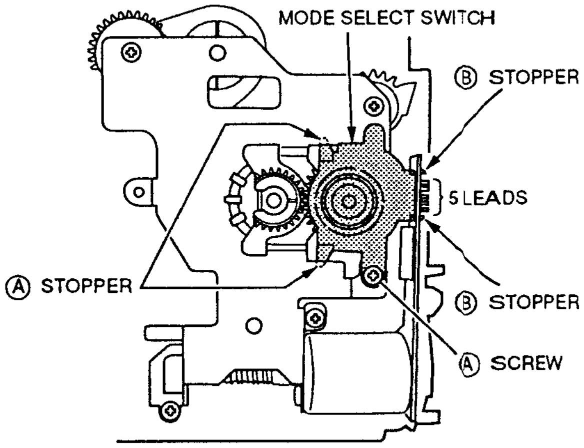


Fig. 4-7

2) Remove the Ⓐ screw.
3) While releasing the two Ⓐ stoppers and two Ⓑ stoppers, carefully remove the MODE SELECT SWITCH by pulling it up and to the left.

4-3-2. Installation of the MODE SELECT SWITCH

1) Install the mode select switch in the reverse order of 4-3-1. When mounting the mode select switch, align the mode select switch's Ⓐ mark with the Ⓑ mark on the cam slider gear as shown in Fig. 4-8.

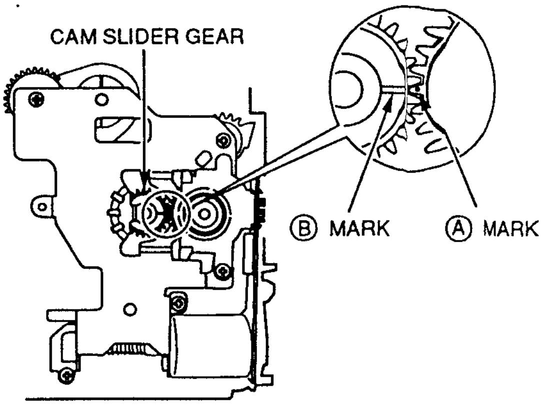


Fig. 4-8

4-4. DISASSEMBLY OF THE LOADING DRIVE BLOCK

※ Set the loading mechanism to the "reference" position. Refer to 4-3, "REMOVAL OF THE MODE SELECT SWITCH" before proceeding.

4-4-1. Removal of the LOADING DRIVE BLOCK

1) Remove the MODE SELECT SWITCH (refer to 4-3-1 "removal of the MODE SELECT SWITCH") if necessary.
2) Remove the Ⓐ, Ⓑ, Ⓒ and Ⓓ screws then remove the LOADING DRIVE BLOCK as shown in Fig. 4-9.

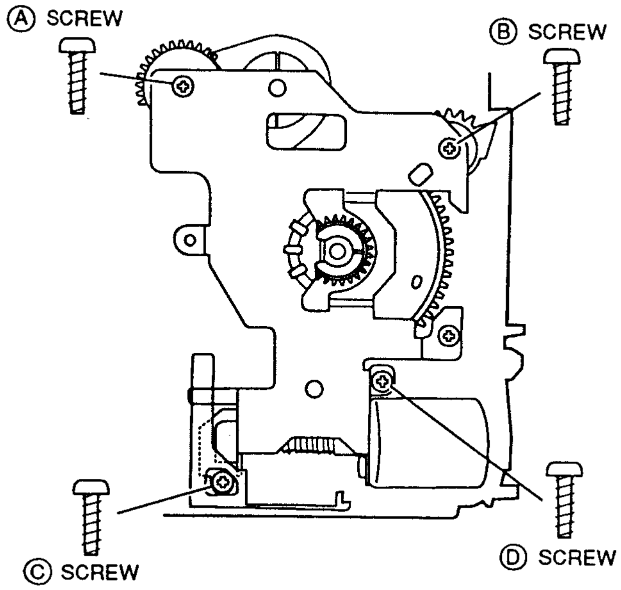

Ⓐ SCREW
Ⓑ SCREW
Ⓒ SCREW
Ⓓ SCREW

Fig. 4-9

4-4-2. Replacement of the LOADING MOTOR

1) Remove the LOADING DRIVE BLOCK (refer to 4-4-1)
2) Unsolder the two leads of the LOADING MOTOR.
3) Remove the two installation screws.

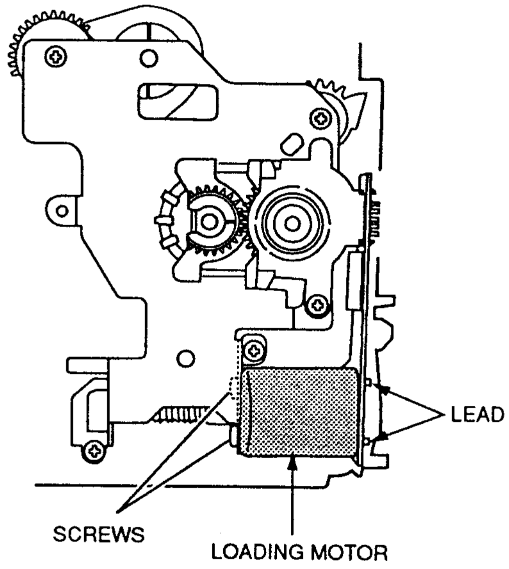

LEAD
SCREWS
LOADING MOTOR

Fig. 4-10

4) Reassemble in the reverse order for installation.

4-5. REASSEMBLY OF THE LOADING MECHANISM BLK

4-5-1. Position of the TOGGLE GEARs (T) and (S)

1) Set the TOGGLE GEARs (T) and (S) to the unloaded position with your fingers. Align the Ⓐ mark on the TOGGLE GEAR (S) with the Ⓐ hole of the TOGGLE GEAR (T) as shown in Fig. 4-11.

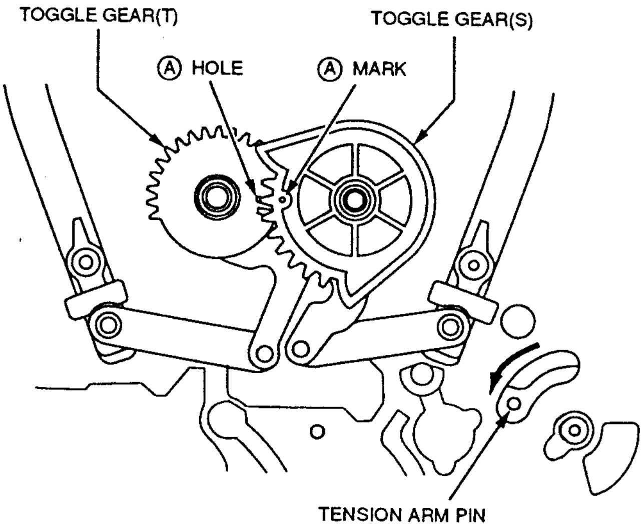

TOGGLE GEAR(T)
TOGGLE GEAR(S)
Ⓐ HOLE
Ⓐ MARK
TENSION ARM PIN

Fig. 4-11

NOTE : When positioning the TOGGLE GEAR (S), the TENSION ARM's pin should be moved in the direction of the arrow before placing the TOGGLE GEAR (S) onto its shaft.

4-5-2. Installation of the CAM SLIDER GEAR & FRONT LOADING GEAR

1) Attach the WORM WHEEL GEAR as shown in Fig. 4-12.

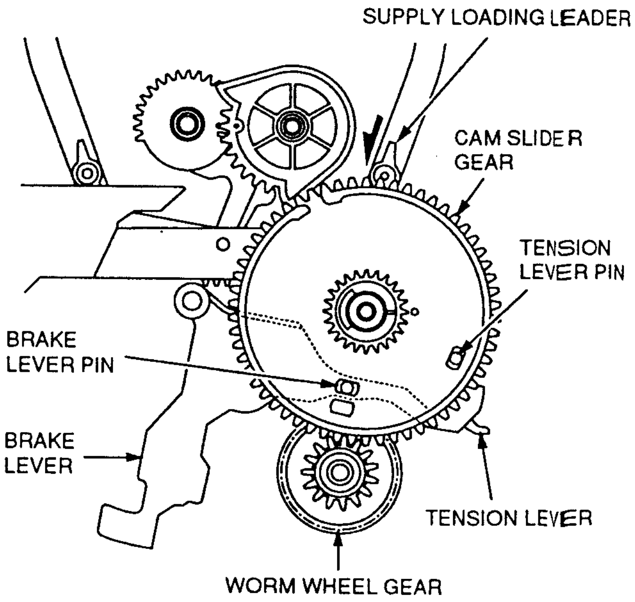

SUPPLY LOADING LEADER
CAM SLIDER GEAR
TENSION LEVER PIN
BRAKE LEVER PIN
BRAKE LEVER
TENSION LEVER
WORM WHEEL GEAR

Fig. 4-12

2) Place the CAM SLIDER GEAR on the shaft and adjust the position of the BRAKE LEVER and TENSION LEVER so that both pins appear through the holes on the CAM SLIDER GEAR as shown in Fig. 4-12. When inserting the CAM SLIDER GEAR onto its shaft, press the SUPPLY LOADING GEAR slightly in the direction of the arrow to make installation easy.
3) Attach the FRONT LOADING GEAR so that the Ⓐ mark on the FRONT LOADING GEAR aligns with the Ⓑ mark on the FRONT LOADING SLIDER and that the Ⓒ mark on the FRONT LOADING GEAR aligns with the Ⓓ mark on the CAM SLIDER GEAR as shown in Fig. 4-13.

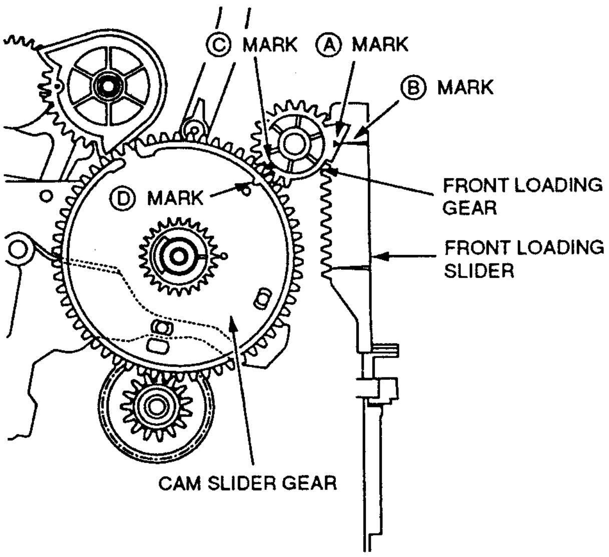

Ⓒ MARK
Ⓐ MARK
Ⓑ MARK
Ⓓ MARK
FRONT LOADING GEAR
FRONT LOADING SLIDER
CAM SLIDER GEAR

Fig. 4-13

4-5-3. Installation of the LOADING BLOCK & MODE SELECT SWITCH

1) Install the LOADING DRIVE BLOCK as shown in Fig. 4-14. Align the Ⓐ mark on the MODE SELECT SWITCH's gear with the Ⓑ mark on the CAM SLIDER GEAR when installing.

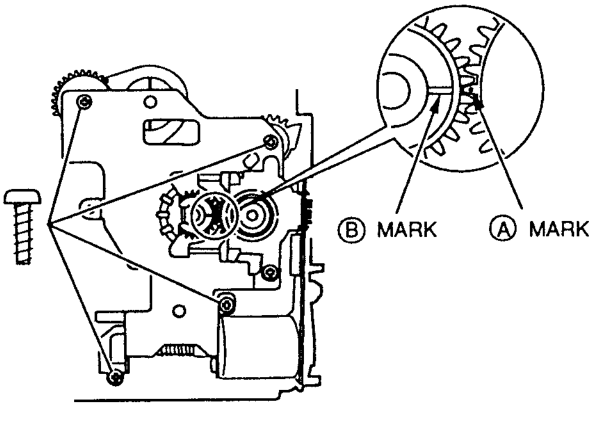


Fig. 4-14

4-6. REPLACEMENT OF THE DISK CLUTCH BLOCK & GEAR COUPLING BLOCK

1) Remove the SLIT WASHER as shown in Fig. 4-15.

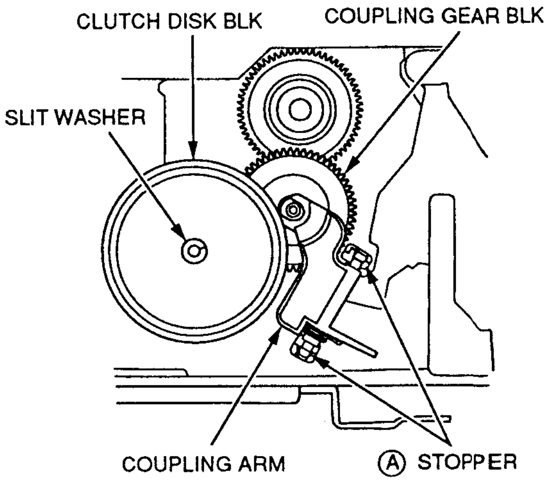

CLUTCH DISK BLK
COUPLING GEAR BLK
SLIT WASHER
COUPLING ARM
Ⓐ STOPPER

Fig. 4-15

2) Release the two Ⓐ stoppers of the COUPLING ARM and pull up the CLUTCH DISK BLOCK and COUPLING GEAR BLOCK at the same time.
3) Reassemble in the reverse order for installation.

4-7. REPLACEMENT OF THE REVIEW BRAKE PART & IDLER PART

4-7-1. Replacement of the REVIEW BRAKE PART

1) Un hook the Ⓐ spring, then release the stopper of the REVIEW BRAKE PART and remove it.

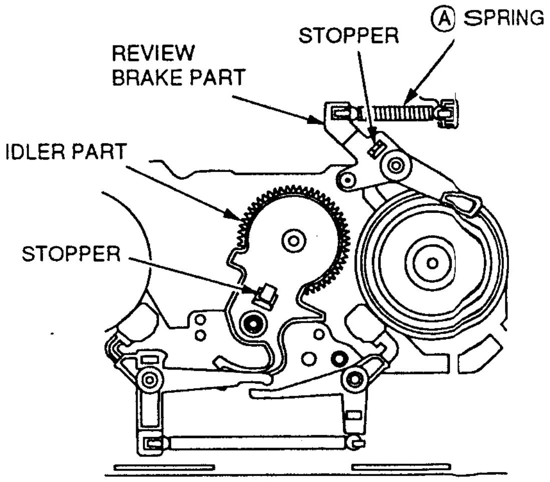

Ⓐ SPRING
STOPPER
REVIEW BRAKE PART
IDLER PART
STOPPER

Fig. 4-16

2) Reassemble in the reverse order for installation.

4-7-2. Replacement of the IDLER PART

1) Remove the CASSETTE LOAD BLOCK & LOADING ARM BLOCK. (Refer to 4-2, "Removal of the EJECTOR BLOCK".)
2) Release the stopper of the IDLER PART and remove it as shown in Fig. 4-16.
3) Reassemble in the reverse order for installation.

4-8. REPLACEMENT OF THE PINCH ROLLER BLOCK

1) Remove theⒶ spring, then remove the PINCH ROLLER ARM BLOCK by turning it in the direction of the arrow and pulling it upward as shown in Fig. 4-17.

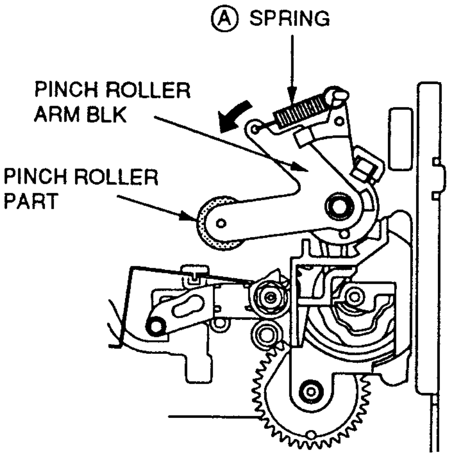

Ⓐ SPRING
PINCH ROLLER ARM BLK
PINCH ROLLER PART

Fig. 4-17

2) Reassemble in the reverse order for installation.

4-9. DISASSEMBLY OF THE PINCH LEVER & PINCH HOLDER

4-9-1. Removal of the PINCH LEVER and PINCH HOLDER

1) Remove the two Ⓐ screws then remove the PINCH LEVER and PINCH HOLDER.

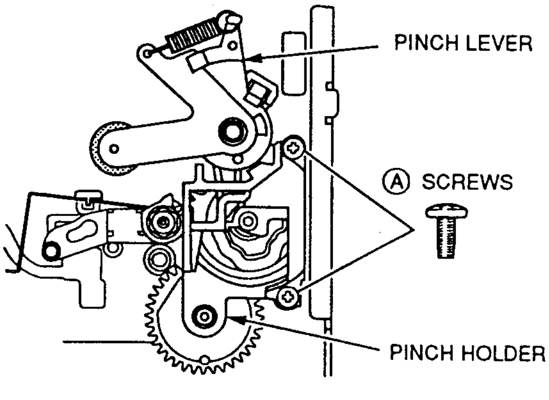

PINCH LEVER
Ⓐ SCREWS
PINCH HOLDER

Fig. 4-18

4-9-2. Installation of the PINCH LEVER and PINCH HOLDER

1) Align the Ⓐ hole on the PINCH SLIDER with the Ⓐ mark on the PINCH GEAR through the hole on the chassis as shown in Fig. 4-19.

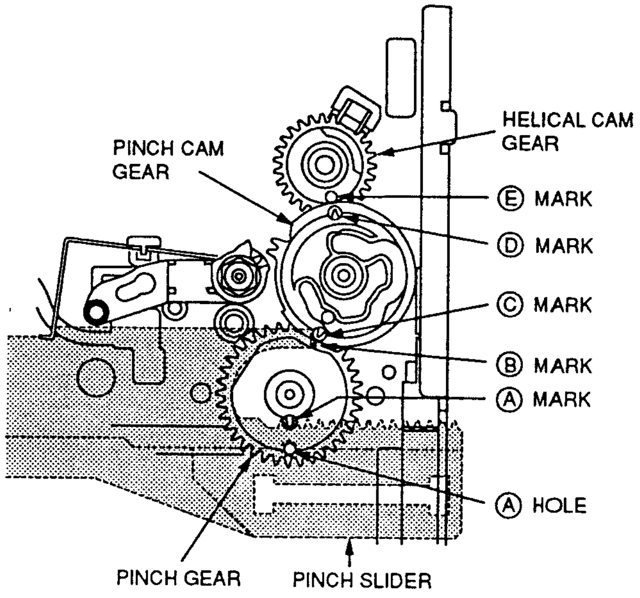

HELICAL CAM GEAR
PINCH CAM GEAR
Ⓔ MARK
Ⓓ MARK
Ⓒ MARK
Ⓑ MARK
Ⓐ MARK
Ⓐ HOLE
PINCH GEAR
PINCH SLIDER

Fig. 4-19

2) Align the Ⓑ mark on the PINCH GEAR with the Ⓒ mark on the PINCH CAM GEAR and the Ⓓ mark on the PINCH CAM GEAR with the Ⓔ mark on the HELICAL CAM GEAR as shown in Fig. 4-19.
3) Install the PINCH LEVER and PINCH HOLDER in the reverse order.

4-10. REPLACEMENT OF THE CAPSTAN MOTOR BLOCK

1) Remove the three Ⓐ screws as shown in Fig. 4-20.

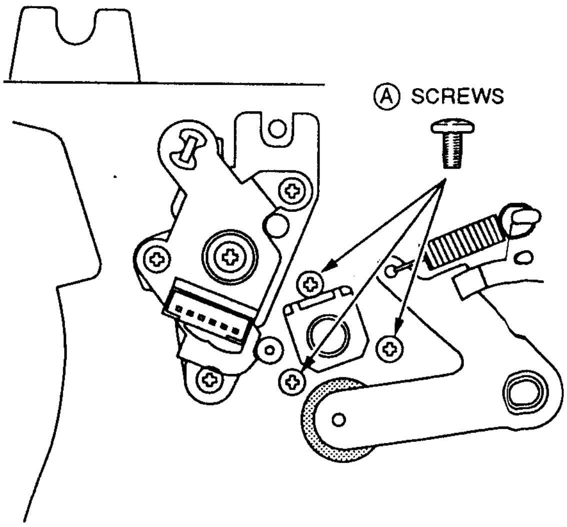


Fig. 4-20

2) Remove the CAPSTAN BELT.

3) Remove the Ⓑ screw and then remove the CAPSTAN MOTOR HOLDER.

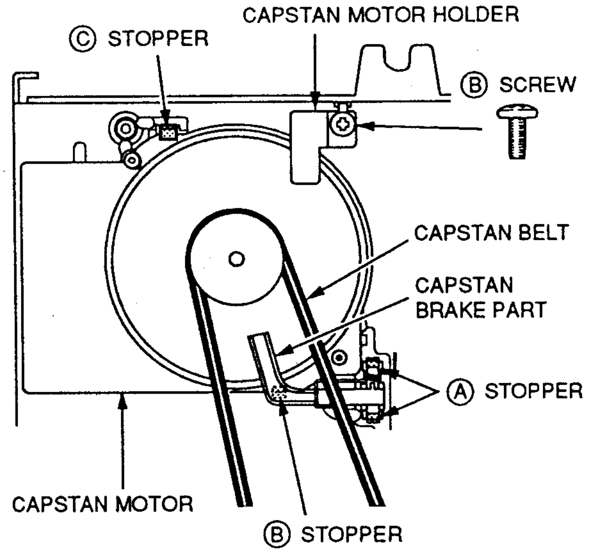

Ⓒ STOPPER
CAPSTAN MOTOR HOLDER
Ⓑ SCREW
CAPSTAN BELT
CAPSTAN BRAKE PART
Ⓐ STOPPER
CAPSTAN MOTOR
Ⓑ STOPPER

Fig. 4-21

4) Release the two Ⓐ stoppers and remove the CAPSTAN BRAKE PART.

5) Remove the CAPSTAN MOTOR BLOCK while releasing the Ⓑ and Ⓒ stoppers.

6) Proceed in the reverse order for installation.

4-11. DRUM MOTOR PC BOARD REPLACEMENT

1) Remove the two Ⓐ screws on the ROTARY PLATE and then remove it.
(If the PRE AMP & Hi-Fi PCB is not removed yet, remove it first before removing the Ⓐ screws. Refer to 4-1-2, "Removal of the PRE AMP & Hi-Fi PCB".)

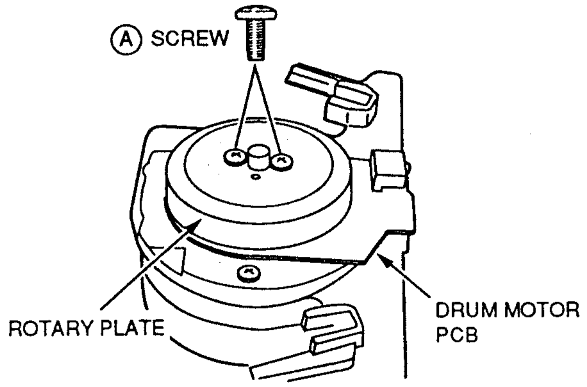

Ⓐ SCREW
ROTARY PLATE
DRUM MOTOR PCB

Fig. 4-22

2) Remove the three Ⓑ screws which retain the DRUM MOTOR PCB and replace it.

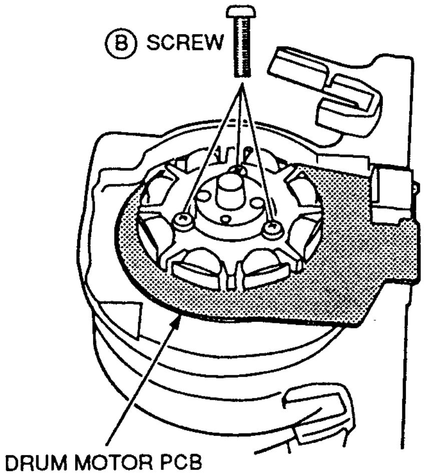

Ⓑ SCREW
DRUM MOTOR PCB

Fig. 4-23

3) Attach the ROTARY PLATE to the collar preload so that the rotary plate Ⓒ hole and collar preload Ⓓ hole line up.

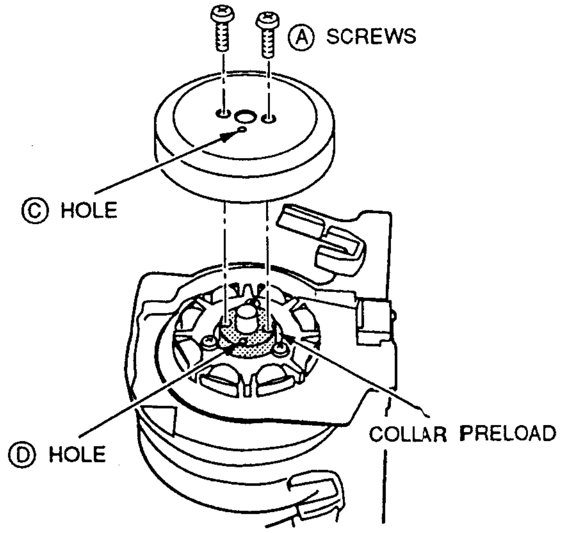

Ⓐ SCREWS
Ⓒ HOLE
Ⓓ HOLE
COLLAR PRELOAD

Fig. 4-24

4) After replacement, PB switching point adjustment (INFORMATION, PRESET IN THE TEST MODE, #3) is absolutely necessary for the proper performance.

4-12. REPLACEMENT OF THE UPPER DRUM

4-12-1. Removal of the UPPER DRUM

1) Unsolder the twelve relay leads and remove the two upper drum fixing screws as shown in Fig. 4-25.

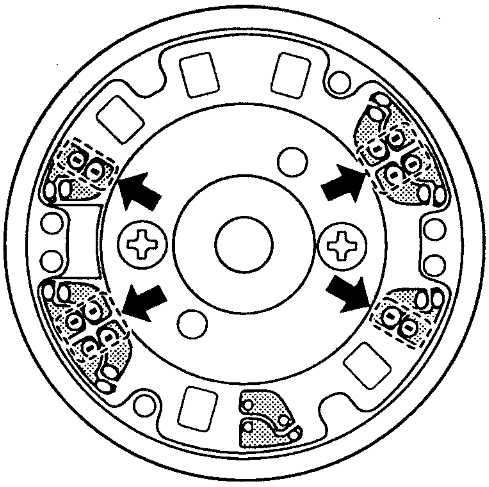


Fig. 4-25

2) Gently lift and remove the UPPER DRUM.

4-12-2. Installation of the UPPER DRUM

1) Attach the UPPER DRUM to the LOWER DRUM ROTOR, so that the upper drum's white mark and lower drum rotor's white mark line up, as shown in Fig. 4-26.

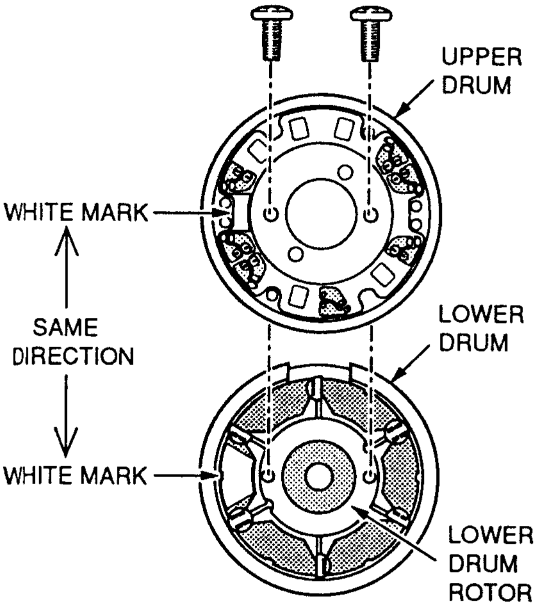


Fig. 4-26

NOTE : Because height precision is required for proper performance, and because head tips are fragile, the following points should be noted when replacing the UPPER DRUM BLOCK.

(a) Do not loosen the set screw on the collar preload.
(b) Before fixing, use alcohol to clean both surfaces where the upper drum and the rotary transformer meet.
(c) If the UPPER DRUM can not be inserted on to the shaft easily during installation, clean the hole in the UPPER DRUM with alcohol and put a little oil on the shaft.
(d) Make sure that the upper drum fixing screw holes, on the rotary transformer part, and the upper drum fixing screw penetration holes match exactly before inserting the fixing screws.
(e) Tighten the two upper drum fixing screws alternately and gradually.

4-12-3. After replacement

After replacement, the following adjustments are necessary for the proper performance.

1) Control head phase adjustment. (MECHANICAL ADJUSTMENT 5-3-3.)
2) PB switching point adjustment. (INFORMATION, PRESET IN THE TEST MODE #3)
3) ENV. DET (I-HQ) adjustment. (INFORMATION, PRESET IN THE TEST MODE #5)
4) Video head REC current adjustment. (VI. ELECTRICAL ADJUSTMENT Steps 5 & 6)

4-13. REMOVAL OF THE POWER SUPPLY PCB

1) Remove the BOTTOM COVER (refer to step 1-2 on page 8).
2) Disconnect the P2 connector on the POWER SUPPLY PCB as shown in Fig. 4-27.

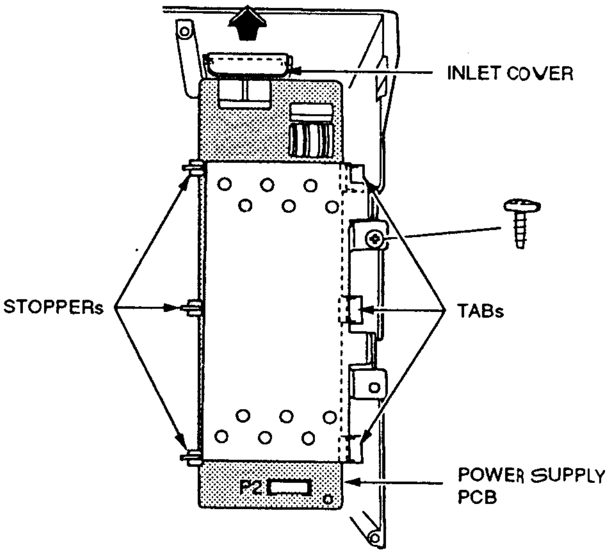


Fig. 4-27

3) Remove the shield cover retaining screw.

4) While pressing the tabs located at the bottom side in the direction of the arrow, remove the INLET COVER by pulling it up.

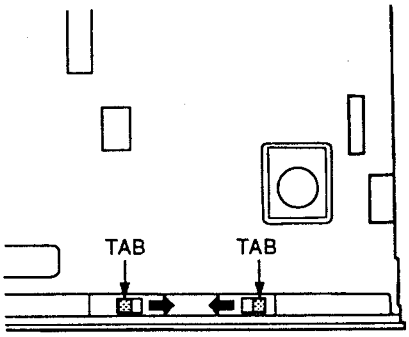


Fig. 4-28

5) While releasing the three tabs, pull up the right side of the POWER SUPPLY PCB carafully then remove the POWER SUPPLY PCB from the chassis as shown in Fig. 4-27.

6) Proceed in the reverse order for installation.

4-14. REMOVAL OF THE MAIN PCB

4-14-1.Removal of the OPERATION PCB

1) Remove the FRONT PANEL BLOCK (refer to step 1-3 on page 8).

2) While releasing the three tabs, pull out the upper side of the OPERATION PCB and angling it at a 45° angle as shown in Fig. 4-29.

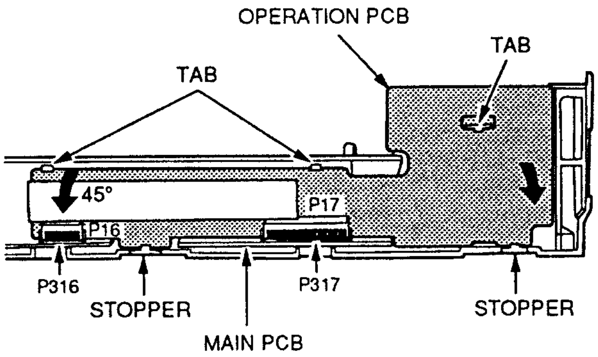


Fig. 4-29

3) Carefully disconnect the P16 and P17 connectors which joins the OPERATION PCB and MAIN PCB by pulling the OPERATION PCB outward in the 45° angle direction.

4) Proceed in the reverse order for installation.

4-14-2.Removal of the PCB HOLDER (2) PART

1) Remove the three retaining screws and remove the PCB HOLDER (2) PART.

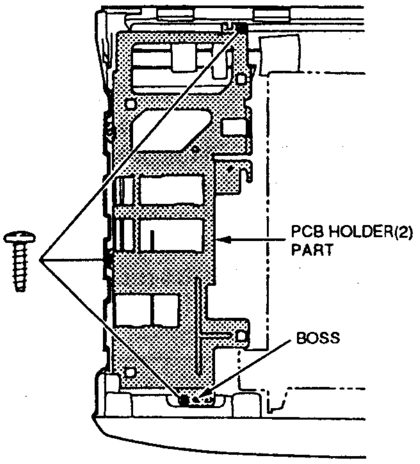


Fig. 4-30

4-14-3.Removal of the MAIN PCB

1) Remove the MECHANISM BLOCK (refer to 4-1 on page 12).

2) Disconnect the P2 connector on the POWER SUPPLY PCB and P403 connector on the MAIN PCB.

3) Lift up the REAR JACK PANEL by pressing the two stoppers in the direction of the arrows as shown in Fig. 4-31.

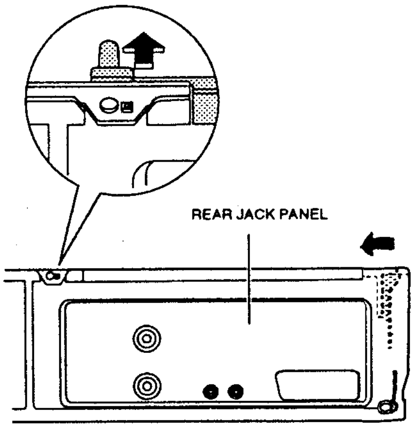


Fig. 4-31

4) Remove the MAIN PCB retaining screw, then carefully remove the MAIN PCB from the chassis while releasing the four tabs as shown in Fig. 4-32.

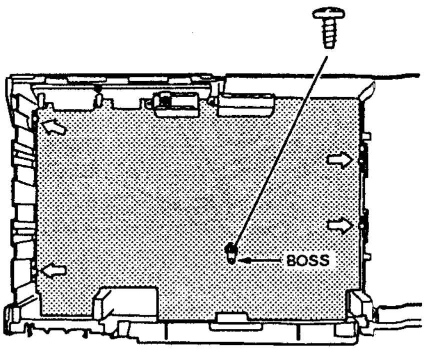


Fig. 4-32

V. MECHANICAL ADJUSTMENT

5-1. BACK TENSION ADJUSTMENT

1) Prepare a video cassette tape which you no longer need. Remove both tape reels and the tape protection cover from the cassette tape. Next, cover the video cassette's left and right detection holes with black adhesive tape.
2) Engage the playback mode using with a tapeless tape.
3) Confirm the distance between the three marks (lines) on the TENSION ARM and the Ⓐ mark on the MECHA. CHASSIS so that the Ⓐ mark aligns with the center line on the TENSION ARM as shown in Fig. 5-1.
4) If the result is not satisfactory, eject the tape and adjust the TENSION ADJUST repeatedly until a satisfactory result is achieved.

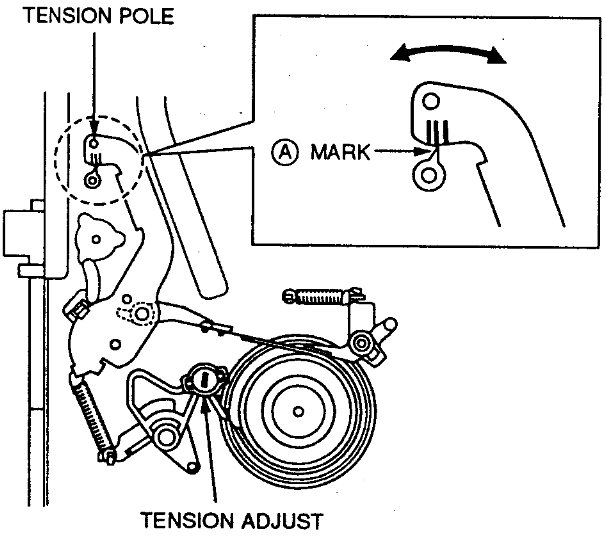


Fig. 5-1

5-2. TAPE TRANSPORT ADJUSTMENTS

NOTE : The following adjustments are required only when an irregularity is found, since these adjustments are precisely set at the factory.

5-2-1. Tape curl adjustment at the TAKE-UP TAPE GUIDE

1) Play back a recorded tape which is no longer needed.
2) Turn the Ⓐ screw on the A/C HEAD BLK, until the edge of the tape barely touches the lower part of the TAKE UP TAPE GUIDE, without any curl or wrinkle.

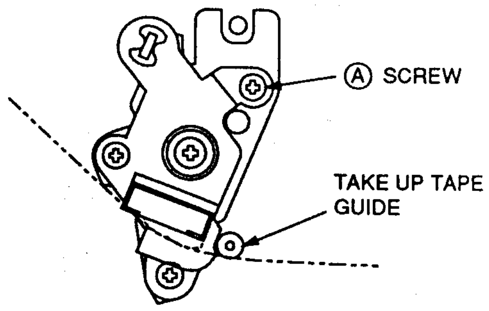
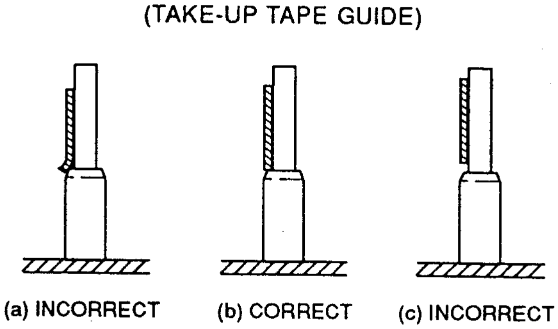


Fig. 5-2



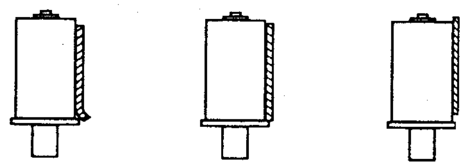
(a) INCORRECT (b) CORRECT (c) INCORRECT

Fig. 5-3

3) Once the Ⓐ screw is adjusted, A/C HEAD height and azimuth adjustment is required. (Refer to 5-3. A/C HEAD POSITION ADJUSTMENT.)

5-2-2. Tape curl adjustment at the SUPPLY TAPE GUIDE

Confirm that the lower edge of the tape barely touches the lower part of the SUPPLY TAPE GUIDE, without any curl or wrinkle as shown in Fig. 5-4a. If necessary, bend the neck part of the TENSION ARM in the Ⓐ or Ⓑ direction slightly until a satisfactory result is achieved.



(a) INCORRECT (b) CORRECT (c) INCORRECT

Fig. 5-4a

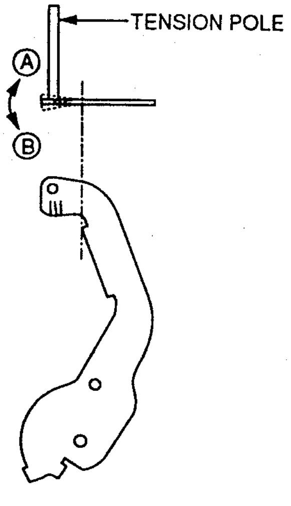


Fig. 5-4b

5-2-3. REVIEW ARM height adjustment

1) Play back the last part of an E-240 (T-160) tape and set the unit to the REVIEW mode by pressing the REW button. (Remove the tape protection cover to make the adjustment easier.)

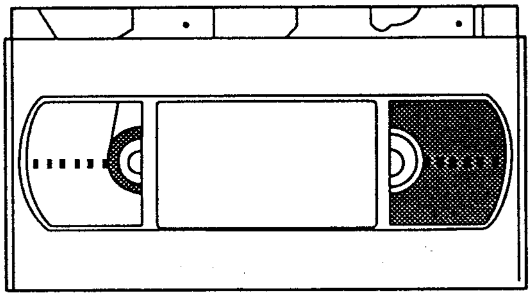


Fig. 5-5

2) Turn the REVIEW ARM height Ⓐ nut so that the edge of the tape barely touches the lower part of the TAKE-UP TAPE GUIDE, without any curl or wrinkle between the TAKE-UP TAPE GUIDE and the CAPSTAN SHAFT as shown in Fig. 5-6 to Fig. 5-8.

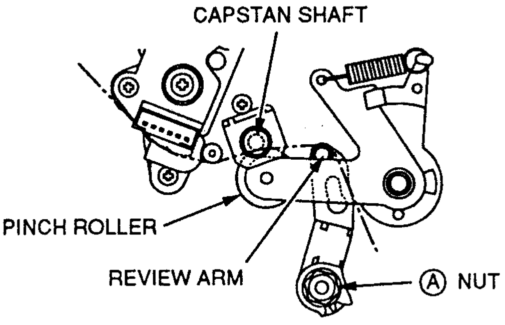
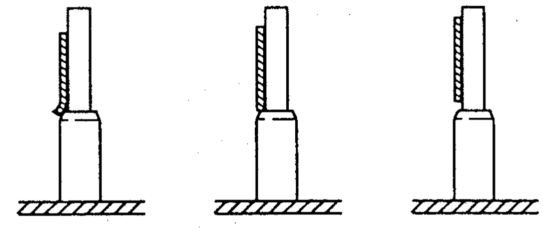


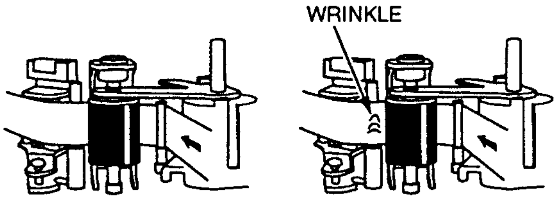
Fig. 5-6

(TAKE-UP TAPE GUIDE)



(a) INCORRECT (b) CORRECT (c) INCORRECT

Fig. 5-7

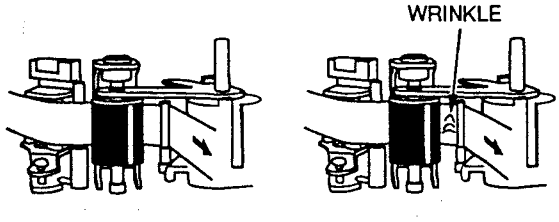


CORRECT INCORRECT

Fig. 5-8

3) Play back the last part of an E-240 (T-160) tape and this time set the unit to the CUE mode by pressing the F. FWD button.

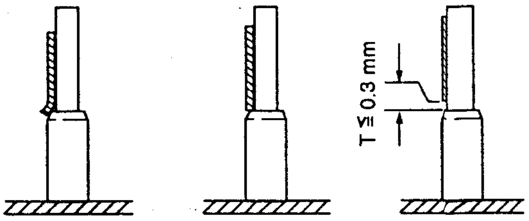
4) Confirm there is no curl or wrinkle near the REVIEW ARM's guide. If curl or wrinkle of the tape occurs, slightly turn the Ⓐ nut (Shown in Fig. 5-6) until it disappears.



CORRECT INCORRECT

Fig. 5-9

5) Set the unit to the REVIEW mode again. Then confirm that there is no curl or wrinkle near the TAKE-UP TAPE GUIDE. (A small gap may appear after this adjustment, but this is allowable.)



(a) INCORRECT (b) CORRECT (c) CORRECT

Fig. 5-10

NOTE :

1. If the results are not satisfactory, repeat steps 2) to 5).
2. Always play an undamaged tape to obtain satisfactory adjustment.
3. Because an E-240 (T-160) tape can be damaged easily, due of its thinness, a pre-adjustment with an E-180 (T-120) tape is recommended.

5-2-4. LOADING LEADER height adjustments

1) Slightly loosen the set screw at the lower part of the LOADING LEADERs (L), (R) so that the LOADING LEADER can be adjusted with reasonable tightness. (Refer to Fig. 5-11.)

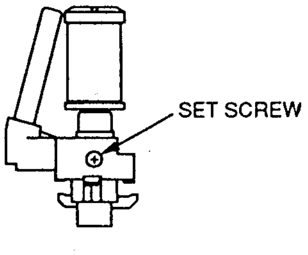


Fig. 5-11

2) Play back the reference tape TF-530RFS (AT-751775).
3) Connect an oscilloscope's CH-1 to the TP1 (ENVE) on the PRE AMP & Hi-Fi PCB and CH-2 to the TP2 (V-SWP) for triggering.
4) Turn the LOADING LEADER heads with a flat head(–) screw driver to obtain a flat RF envelope as the ideal envelope, as shown in Fig. 5-12.
5) After adjustment is completed, tighten the loading leader set screws.

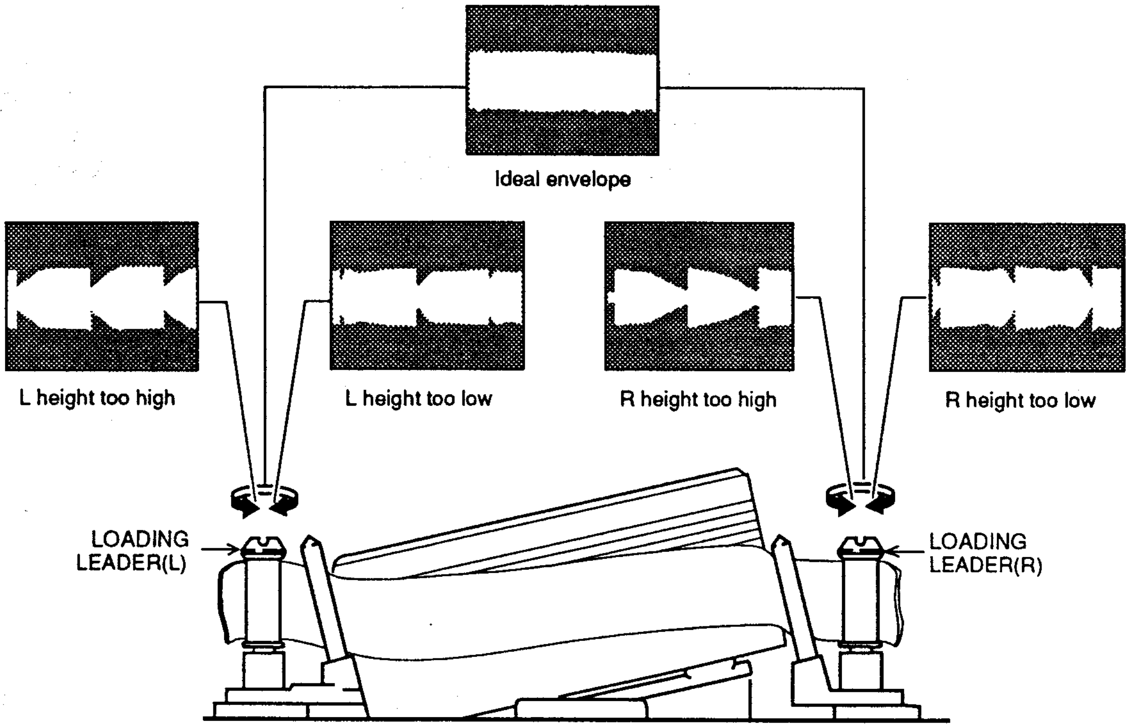

Ideal envelope
L height too high
L height too low
R height too high
R height too low
LOADING LEADER(L)
LOADING LEADER(R)

Fig. 5-12

5-3. A/C HEAD POSITION ADJUSTMENT

5-3-1. Azimuth adjustment

1) Connect an AC voltmeter or an oscilloscope to the AUDIO OUT terminal on the rear panel.
2) Play back the reference tape TF-530RFS (AT-751775).
3) Press the "AUDIO MONITOR" button on the remote control unit repeatedly and choose the linear (normal) audio playback.
4) Adjust the Ⓑ screw to obtain the maximum audio output.

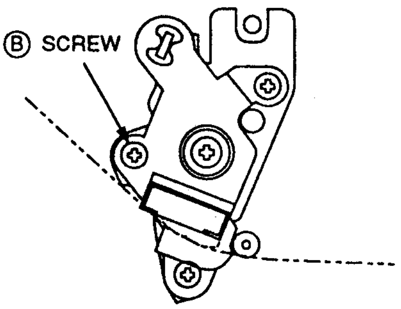


Fig. 5-13

5-3-2. Height adjustment

1) Play back test tape TF-526HH (AT-751788).
2) Connect an oscilloscope to the AUDIO OUT terminal on the rear panel .
3) Slightly turn the Ⓒ screw so that the output level is between 30 ~ 80 mVp-p.

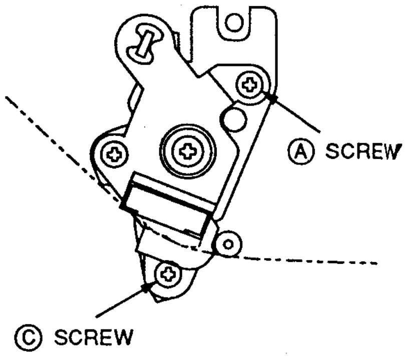

Ⓐ SCREW
Ⓒ SCREW

Fig. 5-14

4) Slightly turn the Ⓐ screw until the tape edge barely touches the lower part of the TAKE-UP TAPE GUIDE without any curl or wrinkle as shown in Fig. 5-3.
5) Adjust the head azimuth again. (Turning the Ⓒ screw, or Ⓐ screw, will cause head azimuth mis-alignment. Refer to 5-3-1. Azimuth adjustment.)
6) Confirm whether the output level is still between 30 ~ 80 mVp-p or not. If the result is not satisfactory, repeat steps 3) to 5).

5-3-3. Phase adjustment

1) Connect an oscilloscope's CH-1 to the TP1 (ENVE) on the PRE AMP & Hi-Fi PCB and CH-2 to the TP2 (V-SWP) for triggering.
2) Play back reference tape TF-530RFS (AT-751775).
3) Press the ">" or "<" TRACKING button on the remote control unit until the "X" mark can be seen in the center position of the tracking range on the TV screen as shown in Fig. 5-15.

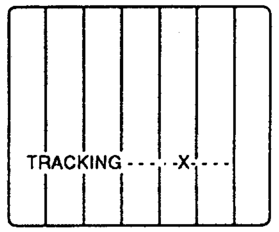


Fig. 5-15

4) Loosen the Ⓓ screw slightly so that the A/C HEAD BASE can be moved with reasonable tightness.

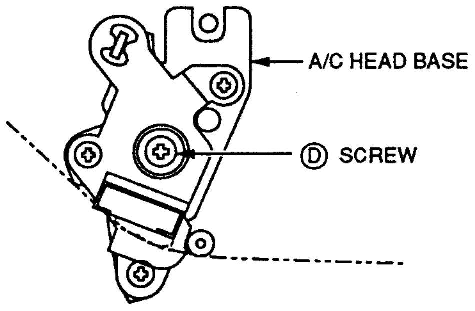


Fig. 5-16

5) Insert a philips type screwdriver into the A/C HEAD BASE and Ⓐ hole as shown in Fig. 5-17

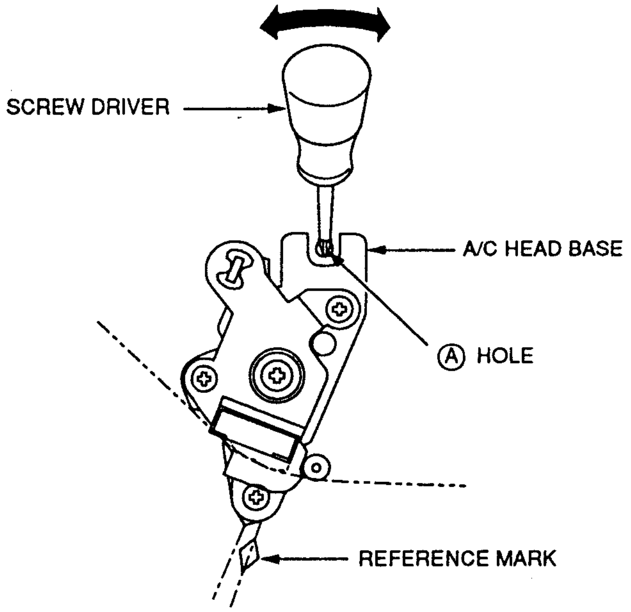


Fig. 5-17

6) Move the A/C HEAD BASE by moving a screwdriver in the direction of the arrow as shown in Fig. 5-17 to obtain the maximum RF output, then tighten the Ⓓ screw. Although there are a few points at which the RF output becomes maximum, the pointed head of the A/C HEAD BASE must be positioned to the left side of the reference mark (head drum direction).
7) Eject the tape and then re-insert it and play it back again. Confirm that the RF output is maximum after the auto tracking control has been activated. Next, press the "<" or ">" cursor button on the remote control unit alternately and confirm that the RF output is maximum at the tracking centre position. If the result is not satisfactory, repeat the adjustment steps 2) to 6). (This adjustment is very important as this affects the interchangeability of the recorded tapes.)

VI. ELECTRICAL ADJUSTMENT

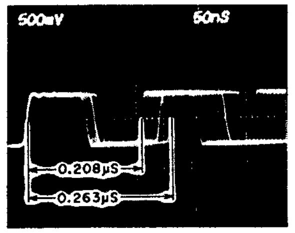
Precautionary items prior to adjustments
1. The colour bar generator output should be 1.0 Vp-p.
2. The video output terminal should be terminated with 75 ohms (connect dummy load or 75 ohms input TV).
3. If the IC601 (Y/C signal processor) on the MAIN PCB is replaced, adjustment (step 1 & 3 to 7) should be performed.
4. To make adjustment easier, remove the PCB HODER (2) PART before proceeding (refer to Fig. 4-30 on page 19).

The following test tape is required.

Test tape	Parts No.
TF-532CBS	AT-751360

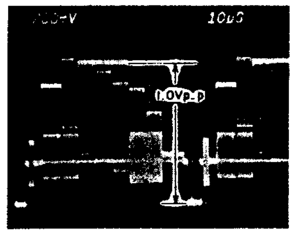
4 CARRIER SET & DEVIATION

1. "E-E", Stair step signal
2. Lead of VR608 (REC-Y) & VR601 (DEVIATION), VR602 (CARRIER),
3. • Connect an oscilloscope to the lead of the VR608 (REC FM OUT).
   - ∗ Adjust VR601 and VR602 alternately until the result is satisfactory.
   - ∗ VR601 (DEVIATION) :0.208 μs (4.8 MHz)
   - ∗ VR602 (CARRIER) :0.263 μs (3.8 MHz)



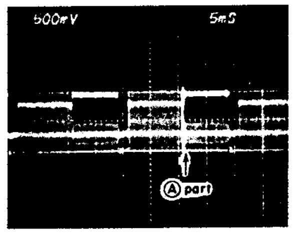
1 VIDEO E-E LEVEL

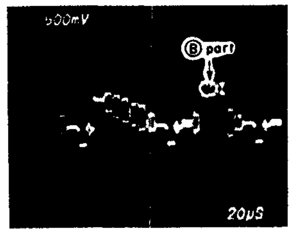
1. "E-E" (STOP mode), PAL colour bar signal
2. VIDEO OUT & VR607 (E-E LEVEL)
3. • Connect an oscilloscope to VIDEO OUT.
   - ∗ 1.0 Vp-p



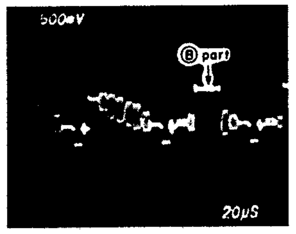
8 CDR (EOG-D model only)

1. "PB", test tape TF-532CBS
2. VIDEO OUT, TP2 (SWP) & VR3 (MIX GAIN) ,VR4 (PHASE ADJ.)
3. • Connect CH-1 of an oscilloscope to VIDEO OUT and CH-2 to the TP2 on the PRE AMP & Hi-Fi PCB for triggering.
   - • Set the oscilloscope to delayed scanning mode and observe the Ⓐ part (line non-correlated part).
   - ∗ After the auto tracking control has been activated, adjust the VR3 and VR4 alternately so that the non-correlated chroma signal (Ⓑ part) is at its minimum level.

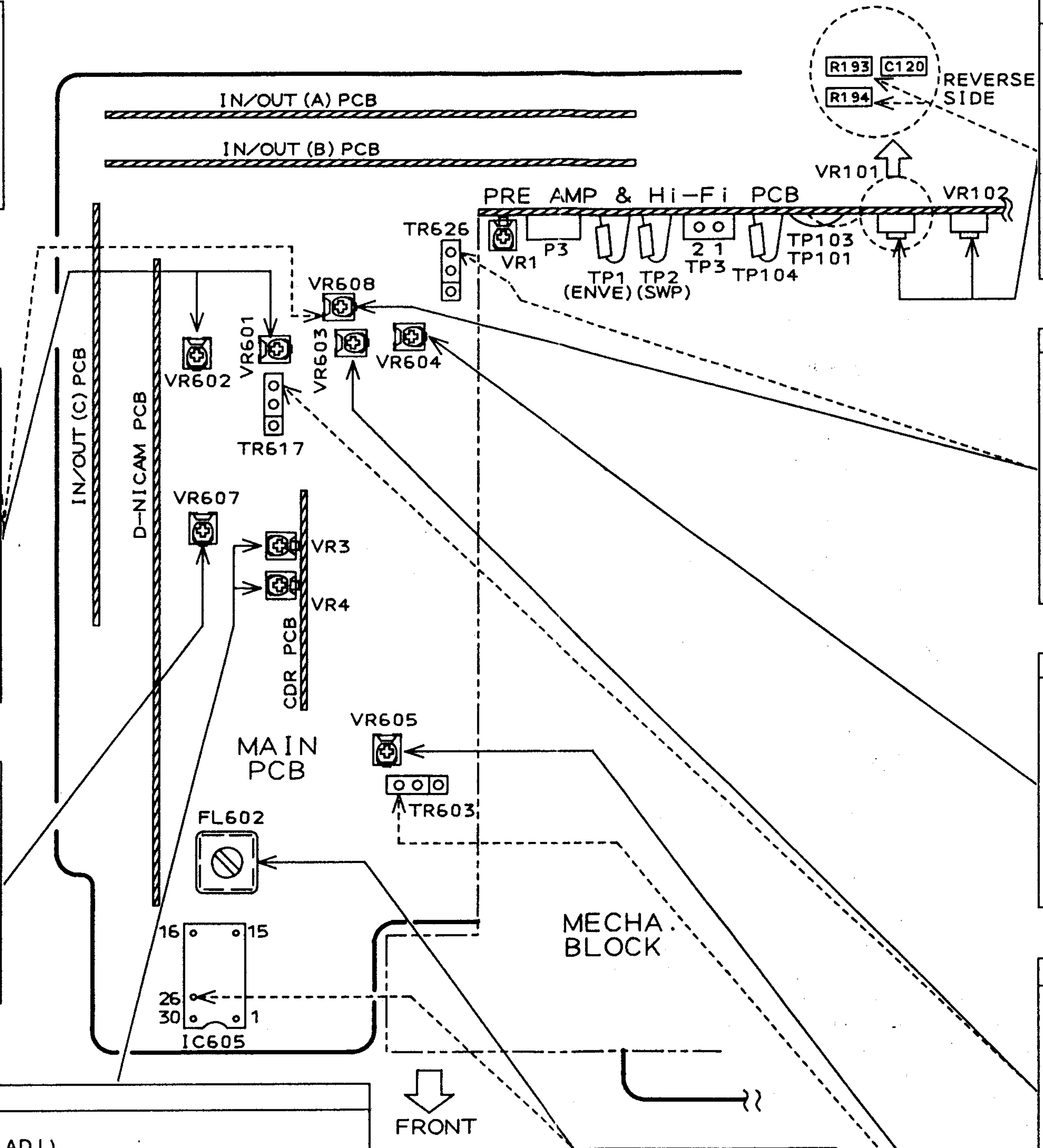




INCORRECT



CORRECT



2 IMS AFC

1. "E-E", PAL colour bar signal
2. IC605 ㉖ pin & FL602
3. • Connect a digital DC voltmeter to the IC605 ㉖ pin.
   - ∗ Adjust FL602 so that the meter registers 2.5 V.

STEP	ADJUSTMENT ITEM
1.	MODE and INPUT SIGNAL/TEST TAPE
2.	TEST POINT and ADJ part
3.	REMARKS (•) & RESULT (∗)

ADJ.part

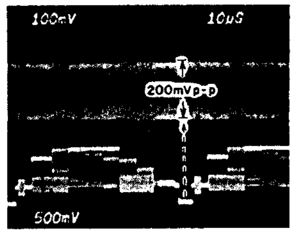
Test point

9 Hi-Fi CARRIER FREQUENCY

1. "E-E", no signal input
2. R193 (1.4 MHz), R194 (1.8 MHz) & VR101 (L-CH fo), VR102 (R-CH fo)
3. • Connect a frequency counter to the lead of R193 on the PRE AMP & Hi-Fi PCB.
   - ∗ Adjust the VR101 so that the frequency counter registers 1.4 MHz ± 50 Hz.
   - • Connect a frequency counter to the lead of R194.
   - ∗ Adjust the VR102 so that the frequency counter registers 1.8 MHz ± 50 Hz.

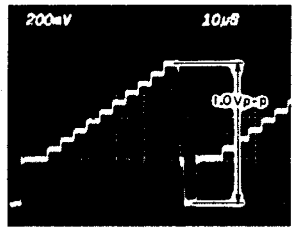
5 Y REC CURRENT

1. "E-E", PAL colour bar signal
2. TR626 emitter (REC-Y) & VR608 (REC-Y),
3. • Connect an oscilloscope to the TR626 emitter on the MAIN PCB.
   - ∗ Adjust VR608 so that the Y REC current becomes 200 mVp-p at the sync signal area.



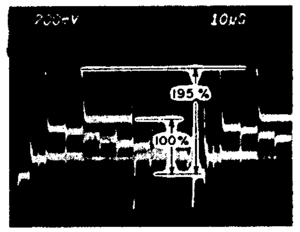
7 VIDEO PB LEVEL

1. "REC"→ "PB", stair step signal
2. VIDEO OUT & VR604 (PB LEVEL)
3. • Connect an oscilloscope to VIDEO OUT.
   - • Make a recording on a blank tape, then play it back.
   - ∗ Adjust VR604 so that the PB level becomes 1.0 Vp-p.



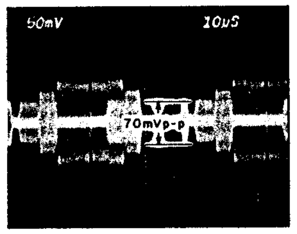
3 WHITE CLIP

1. "E-E", Stair step signal
2. TR617(EMITTER) & VR603 (WHITE CLIP)
3. • Connect an oscilloscope to the emitter of TR617.
   - ∗ Adjust VR603 so that the white clip level is 195 % of the video level (the level from sync tip to white 100%).



6 CHROMA REC CURRENT

1. "E-E", PAL colour bar signal
2. TR603 emitter & VR605 (REC-CHROMA)
3. • Connect an oscilloscope to the TR603 emitter.
   - • Set the tape speed to "SP mode".
   - ∗ Adjust VR605 on the MAIN PCB so that the burst signal level becomes 70 ± 5 mVp-p.



VII. PARTS LIST

ATTENTION

1. When placing an order for parts, be sure to list the Part No., Model No. and the description of earch part. Otherwise, the non-delivery of the part or the delivery of a wrong part may result.
2. Please make sure that Part No. is correct when ordering. If not, a part different from the one you ordered may be delivered.
3. Since the parts shown in Parts List or Preliminary Service Manual may have been the subject of changes, please use this Parts List for all future reference.

HOW TO USE THIS PARTS LIST

1. This Parts List lists those parts which are considered necessary for repairs. Other common parts, such as resistors and capacitors, are listed in the "Common List for Service Parts" from which these parts should be selected and stocked.
2. The Recommended Spare Parts List shows those parts in the Parts List which are considered particularly important for service.
3. Parts not shown in the Parts List and "Common List for Service Parts" will not in principle be supplied.
4. How to read the Parts List.

a) Mechanism Block

2.HEAD BASE BLOCK

Ref. No.	Part. No.	Description
1	BH-T2023A320A	HEAD BASE BLOCK
2	HP-H2206A010A	HEAD R/P PR4-8FU C
3	ZS-477876	PAN20×03STL CMT
4	ZS-536488	BID20×08STL CMT
5	ZG-402895	SP CS ANGLE ADJUST

SP (Service Parts) Classification

This number corresponds with the individual parts index number in the figure.

b) PC Board

2.MAIN PC BOARD

Ref. No.	Part. No.	Description
IC1	EI-324536	IC HD14049BP
IC2	EI-336801	IC MB8841-564M
C1A	EC-338399	C MMY V 223M 250AC [U,E,B,S]
C1B	EC-350949	C MMY V 223M 250DC [J]
C1C	EC-338397	C MMY V 223M 125AC [C,A]
X1	EI-318384	OSC X'TAL NC-18C

Symbols for primary destination

[A] : AAL (U.S.A) [S] : SAA (Australia)
[B] : BEAB (England) [U] : U/T (Universal Area)
[C] : CSA (Canada)
[E] : CEE (Europe) [V] : VDE (Germany)
[J] : JPN (Japan) [Y] : Custom

SP (Service Parts) Classification

These reference symbols correspond with component symbols in the Schematic Diagrams.

The available PC Board Blocks are listed separately.

5. When Part No. is known, Parts Index at end of Parts List can be used to locate where that part is shown in Parts List by its Reference No. listed at right of Part No.

WARNING

⚠ (✱) INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS.

AVERTISSEMENT

⚠ (✱) IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCUTITÉDE L'APPAREIL, NE REMPLACER QUE DES PIÉCES RECOMMANDEES PAR LÉ FABRICANT.

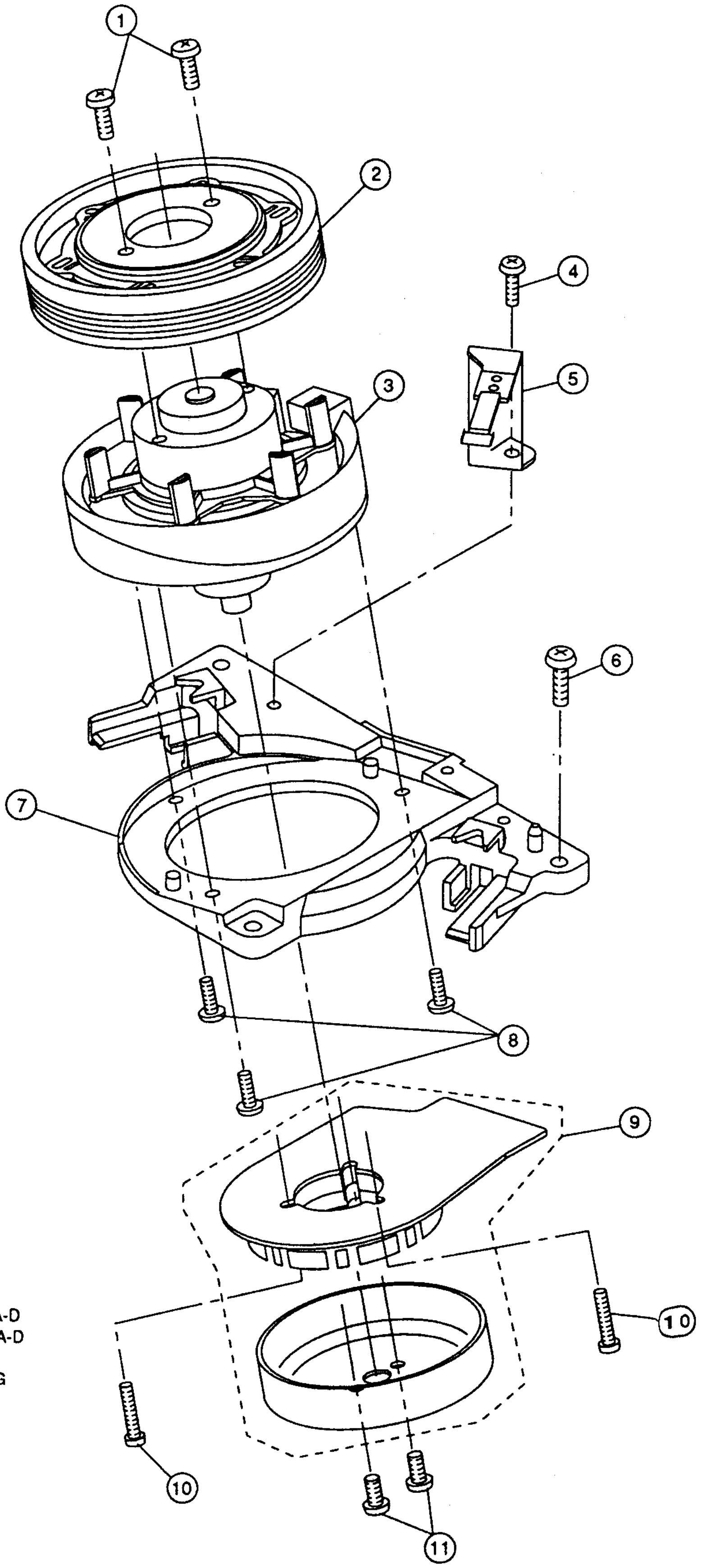
1. RECOMMENDED SPARE PARTS

We suggest you to stock the following Recommended Spare Part items listed below since they can cover most of the routine service.

Ref. No.	Part No.	Description
1	AV-422505N	REMOCON RC-W556G [G712EOG]
2	AV-422507N	REMOCON RC-W566E [EK]
3	AV-422508N	REMOCON RC-W576E [EO,EOH-N/DN]
4	AV-422509N	REMOCON RC-W576G [G717EOG]
5	AV-416974M	REMOCON RC-W600E [EA,EOH-D]
6	AV-418989N	REMOCON RC-W656E [EDG]
7	BB-421838N01	MECHA DECK G215EK
8	BL-424913N00	ARM LOADING BLK G204EA
9	BL-420054N	ARM PINCH ROLLER PART
10	BM-421746N	MOTOR PART
11	BM-419269N	MOTOR SCV-0602A
12	BM-419324J1	MOTOR SDV-0302A
13	*BT-422117N	TRANS POW V1190 EOG
14	BV-424919N00	CASSETTE LOAD BLK G204EA
15	BV-424914N00	LEADER(S) BLK G204EA
16	BV-424915N00	LEADER(T) BLK G204EA
17	BV-V1182A410D	LOWER DRUM BLK G705EA-D
18	BV-425222J	RF CONVER. YAA21-1001G G/K EDG [EDG]
19	BV-403410J	RF CONVERTER MDLK6B733A EK [EK]
20	BV-403409J	RF CONVERTER MDLK6D755A EO [EXCEPT EA,EDG,EK]
21	BV-387610J1	RF CONVERTER YAA21-0809G EA [EA]
22	BV-V1182A420E	UPPER DRUM BLK G705EA-D
23	BV-422570J	VIF UNIT AHX EA [EA]
24	BV-422571J	VIF UNIT AHX EK [EK]
25	BV-422574J	VIF UNIT AHX EOG [EO]
26	BV-422576J	VIF UNIT AHX EOHD [EOH-D]
27	BV-422575J	VIF UNIT AHX EOHN [EOH-N/DN]
28	BV-427235J	VIF UNIT AHX TEK EOG [EOG]
29	BV-422132J	VIF UNIT AX EDG [EDG]
30	ED-390012J	D LED GL4800 INFRARED
31	ED-422251J	D LED GL528VTB INFRARED T05
32	ED-422243N	D SCHOT.AK03WK T05
33	ED-422244J	D SCHOTTKY RK34LF-B2 S12
34	ED-422462J	D SCHOTTKY RK49 015-302 S15
35	ED-410157J	D SILICON CHIP MA152WA
36	ED-427158J	D SILICON CHIP MA153/A TXT08E
37	*ED-418976N	D SILICON EG01CW T05 1000/0.5A
38	ED-425207J	D SILICON ERA18-02 T26
39	ED-360318	D SILICON H MA700
40	ED-307572	D SILICON H 1SS131
41	*ED-511907	D SILICON 1N4002 100/1.0A
42	*ED-422125J	D SILICON 1N4006 T26 800/1.0A
43	ED-733546J	D VARACTOR CHIP HVU202A3TRF [EOH]
44	ED-397233J	D ZENER H HZS5C3
45	ED-387919J	D ZENER H HZS6A1L
46	ED-367502	D ZENER H HZS9A1L [EXCEPT EA,EK,EO]
47	ED-397614J	D ZENER H HZS9A3L T26
48	ED-425442J	D ZENER H MTZJ13A T26
49	*ED-422420J	D ZENER H MTZJ20C T26
50	*ED-422519J	D ZENER H MTZJ4.3B T26
51	ED-405604J	D ZENER H MTZJ4.3C T26
52	ED-425605J	D ZENER H MTZJ4.7B T26
53	ED-427218J	D ZENER H MTZJ6.2C T26
54	ED-404220J	D ZENER H MTZJ9.1B T26
55	EE-412395J	TV TUNER ENV-578C9F1 EOH [EOH]
56	EE-416524J1	TV TUNER TEKE4-034B EOG [EDG,EOG]
57	EE-387607J1	TV TUNER TERB1-008B EK [EK]
58	EE-387604J3	TV TUNER TERE1-007D EOG [EO]
59	EE-387600J2	TV TUNER TERS1-002C EA [EA]
60	*EF-601964	FUSE SET T 250V 1.60A
61	EH-416491J	DL EFDJLA13A [EXCEPT EOG]
62	EH-732529J	FILTER CE SAF31.4MC70Z [EA]
63	EH-733747J	FILTER CE SAF32.9MC70Z [EK]
64	EH-733748J	FILTER CE SAF33.0MC70Z [EOH-N/DN]
65	EH-732528J	FILTER CE SAF33.4MC70Z [EO,EOG,EOH-D]
66	EH-373916	FILTER CE SAF36.9MZ70Z [EA]
67	EH-733563J	FILTER CE SAF38.9MZC70Z
68	EH-730625J	FILTER CE SAF38.9MZW70Z [EO,EOG,EOH]
69	EH-373917	FILTER CE SAF39.5MZ70Z [EK]
70	EH-373921	FILTER CE SFE6.0MB
71	EH-412432J	FILTER CE SFSH6.5MDB 6.500MHZ
72	EH-368827	FILTER CE SFS5.5MD 5.500MHZ
73	EH-394948J	FILTER CE SFT5.5MA [EOH-N/DN]
74	EH-416920J	FILTER CE SFT6.0MA [EK]
75	EH-729986J	FILTER CE TPS5.5MB2
76	EH-368948	FILTER CE TPS5.5MW 5.5000MHZ [EA,EO,EOG,EOH]
77	EH-733749J	FILTER CE TPS6.0MB2 [EK]
78	EH-376338	FILTER CE TPS6.5MB
79	EI-425189J	IC AN3317K
80	EI-416607J	IC AN3386NK-A
81	EI-422151J	IC AN3558FBS
82	EI-425194J	IC AN3963NFBPA
83	*EI-422131J	IC AN7809F
84	EI-389644J	IC BA403
85	EI-366892	IC BA7025L
86	EI-385995J	IC BA7755A
87	EI-356457	IC BU4013B
88	EI-425537J	IC LA6358NM
89	EI-729997J	IC LA7575 [EA,EO,EOG,EOH-D]
90	EI-733547J	IC LA7577 [EK,EOH-N/DN]
91	EI-403233J	IC LB1641
92	EI-419157J	IC LC74760-9044
93	EI-394856J	IC LC8992
94	EI-389622J	IC L5631
95	EI-408961J	IC MM1031XS [EOH-DN[Y2]]
96	EI-416647J	IC MM1111XS [EOH-DN[Y2]]
97	EI-416646J	IC MM1113XS
98	EI-425324J1	IC M37770M4H-163FP AHXSYP2
99	EI-422218J	IC M51494L
100	EI-368809	IC M51496P
101	*EI-418723J	IC NJM4558DX
102	EI-400756J	IC NJM4558L-B
103	EI-422090J	IC SAA5233P [EK,EOG,EOH-DN[Y1]]
104	EI-422128N	IC TA76431S T05
105	EI-332259	IC TC4052BP
106	EI-200573	IC TC4053BP
107	EI-310036	IC TC4066BP [EOH-DN[Y2]]

Ref. No.	Part No.	Description
108	EI-425190J	IC TDA8204
109	EI-425191J	IC TDA8205
110	EI-416611J	IC TDA8417
111	EI-425246J1	IC UPD75217GF-647-3BE AHXOPP2
112	EI-416691J	IC XC61AC3002TH T05
113	EI-425668J	IC 24LC02B/SN
114	EI-368829	OSC CE CSB512P
115	EI-418824J	OSC CE W/C FCR4.19MC5 4.190MHZ
116	EI-425184J	OSC X'TALAPS-1007 11.648MHZ
117	EI-425240J	OSC X'TALAPS-1011A 16.000MHZ
118	EI-416872J	OSC X'TALAPS1004A 17.734475MH
119	EI-422092J	OSC X'TALAPS1008 3RD27.000MHZ [EK,EOG,EOH-DN[Y1]]
120	EI-425185J	OSC X'TALASP-1006 10.000MHZ
121	EI-368825M	OSC X'TAL C-002RX 32.768KHZ
122	EI-422510J	OSC X'TAL HC-49/U 4433.619KHZ
123	EM-422542J	IND FL FIP10CCM7 CHARACTER
124	* ER-408829J	R FUSE V T05 RF25SCVTP1/4WR11K
125	* ER-400728J	R FUSE V T05 RF25SCVTP1/4WR12K
126	* ER-418648J	R FUSE V T05 RF25SCVTP1/4WR24K
127	* ER-400729J	R FUSE V T05 RF25SCVTP1/4WR47K
128	ES-419326J	<SW MODE SELECT MMS00201ZMB0>
129	ES-422247J	SW MICRO MPU10181MLB0
130	ES-408404J	SW TACT EVQ 235 07K T05
131	ES-411687J	SW TACT EVQ-PAE05R
132	ET-425638J	DETECTOR SBX1815-R2
133	* ET-422113J	PHOTO COUPLER PS2561-1-V
134	ET-422464J	TR C.2SD2118 Q,R,S FPTLT16E
135	ET-427131J	TR CHIP DTA115TK
136	ET-731437J	TR CHIP DTC114EK [EO,EOG]
137	ET-421984J	TR CHIP UN211D TXT08E
138	ET-421974J	TR CHIP UN2111 R,S TXT08E [EDG]
139	ET-421977J	TR CHIP UN2113 TXT08E
140	ET-421979J	TR CHIP UN2115 R,S TXT08E
141	ET-421999J	TR CHIP UN221D TXT08E
142	ET-421990J	TR CHIP UN2211 TXT08E
143	ET-421991J	TR CHIP UN2212 TXT08E
144	ET-414836J	TR CHIP UN2213 TXT08E [EA]
145	ET-421993J	TR CHIP UN2215 R,S TXT08E
146	ET-370818	TR CHIP 2SA1235 [EK,EOH-N/DN]
147	ET-416932J	TR CHIP 2SB709A R,S TXT08E [EA]
148	ET-725820J	TR CHIP 2SC2735J
149	ET-370819	TR CHIP 2SC3052
150	ET-416933J	TR CHIP 2SD601A R,S TXT08E [EXCEPT EK,EOG,EOH-DN[Y1]
151	ET-415140J	TR DTA115TS T05
152	ET-373391	TR DTC143ZS
153	ET-390010J	TR PHOTO PT4800
154	ET-390009J	TR PHOTO PT493F
155	ET-419710J	TR UN4113 T05
156	ET-419712J	TR UN4115 R,S T05
157	ET-422254J	TR UN4117 R,S T05
158	ET-364040	TR UN421D
159	ET-421952J	TR UN421L T05
160	ET-360400	TR UN4210 [EXCEPT EA,EK,EO]
161	ET-422031J	TR UN4210 R,S T05
162	ET-421939J	TR UN4211 T05
163	ET-421941J	TR UN4213 T05 [EXCEPT EK]
164	ET-421944J	TR UN4215 R,S T05
165	ET-421945J	TR UN4216 R,S T05
166	ET-353899	TR 2SA1317 S,T,U
167	* ET-404498J	TR 2SB1306 Q,R T05
168	* ET-422154J	TR 2SB1426 Q,R T05
169	ET-414816J	TR 2SC2668 Y T05
170	ET-397160J	TR 2SC3330 R,S,T,U,V [EXCEPT EK]
171	* ET-422118J	TR 2SC4304 O,Y
172	* ET-422129J	TR 2SD2132 U,V T05
173	* ET-422511J	TR 2SD2375 P
174	EW-422531J	CORD FFC BD P1.25 L150 16P
175	EW-419012J	CORD SHIELD FFC L150 18P
176	* EX-405691J	THERMISTOR NTH5D332KA
177	* EX-412521J	THERMISTOR 911P83E101NH07 T05
178	HE-422168J	HEAD E HVFHF0032A
179	HR-416732J	HEAD COMBO HVMZA1161A
180	MB-420053N	BELT CAPSTAN
181	MI-420023N	ARM IDLER PART
182	MI-420038N	DISK CLUTCH PART
183	MI-420037N	DISK COUPLING
184	ML-420033N	ARM COUPLING
185	ML-420170N	ARM LID OPENER
186	ML-420097N	ARM LOADING BRAKE
187	ML-420068N	ARM REVIEW PART
188	ML-420102N	ARM T.U BRAKE
189	ML-420006N	ARM TENSION PART
190	ML-420126N	CAPSTAN BRAKE PART
191	ML-420099N	LEVER M BRAKE
192	ML-420061N	LEVER PINCH
193	ML-420133N	LEVER REC-S
194	ML-420416N	LEVER TENSION(1)PART
195	ML-420086N	MAIN BRAKE(S)PART
196	ML-420089N	MAIN BRAKE(T)PART
197	ML-420092N	REVIEW BRAKE PART
198	ML-420110N	SLIDER PINCH
199	ML-420100N	SLIDER TRIGGER
200	MR-420109N	HOLDER THRUST WORM
201	MR-420106N	PULLEY TRIGGER
202	MR-420022N	ROLLER IMPEDANCE
203	MT-424632N	DISK(2) PART
204	MZ-420064N	GEAR CAM HELICAL
205	MZ-420122N	GEAR CAM MAIN
206	MZ-420066N	GEAR CAM PINCH
207	MZ-420035N	GEAR COUPLING
208	MZ-420124N	GEAR FRONT LOADING
209	MZ-420067N	GEAR PINCH
210	MZ-424917N00	GEAR TOGGLE (S) BLK G204EA
211	MZ-424916N00	GEAR TOGGLE (T) BLK G204EA
212	MZ-420123N	GEAR WORM WHEEL
213	MZ-420132N	PRISM LED
214	MZ-420016N	TENSION BAND PART
215	ZG-420036N	SP PUSH COUPLING
216	ZG-420105N	SP TRIGGER

HEAD DRUM BLOCK

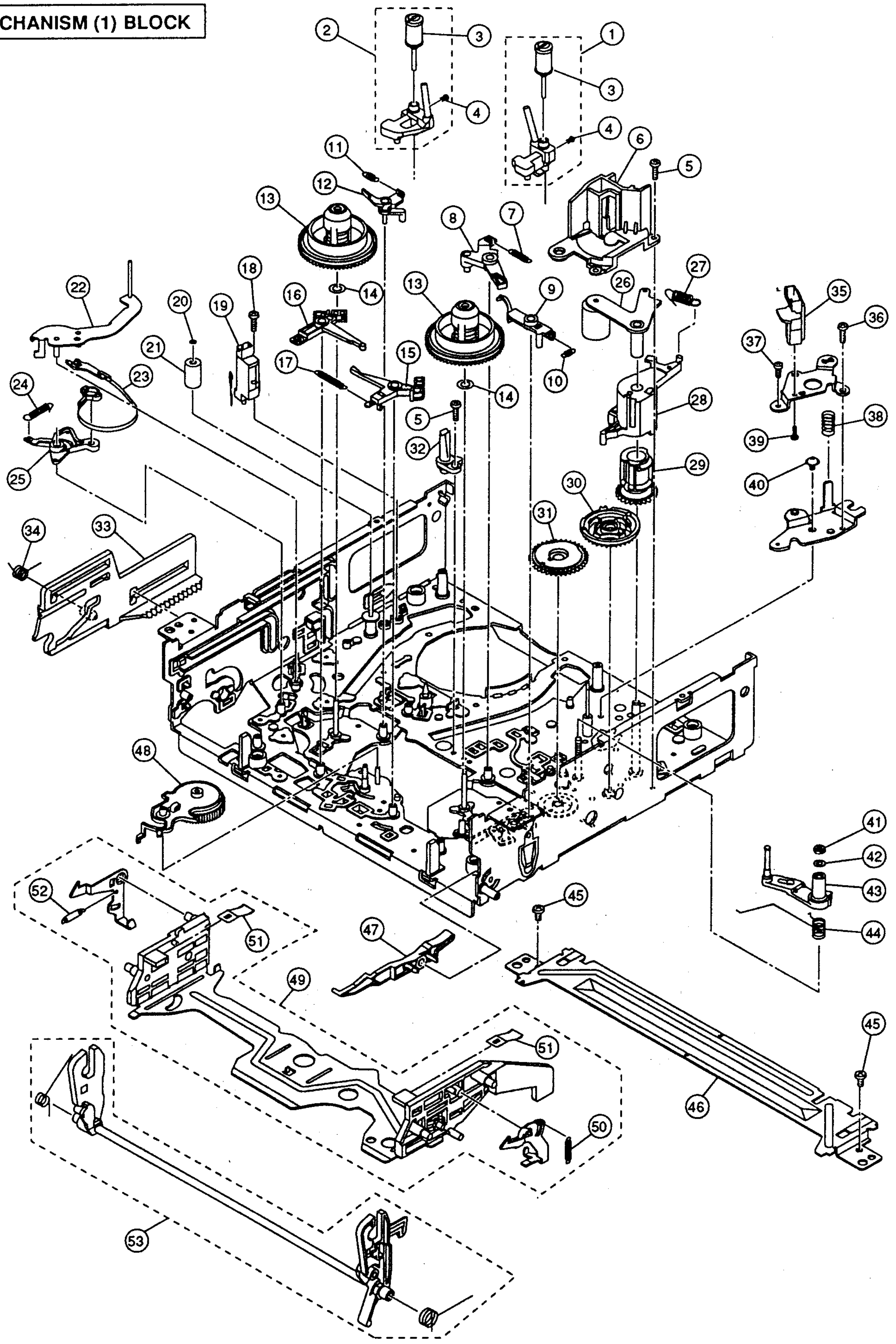


2. HEAD DRUM BLOCK

Ref. No.	Part No.	Description
1	ZS-321298	BID30X08STL CMT
2	BV-V1182A420E	UPPER DRUM BLK G705EA-D
3	BV-V1182A410D	LOWER DRUM BLK G705EA-D
4	ZS-358936	ST BID30X06STL CMT
5	VT-418700J1	EARTH BRUSH (2) PART AG
6	ZS-336714	ST BID30X12STL CMT
7	MA-424961J	CHASSIS DRUM(2)
8	ZS-563444	BID26X08STL CMT
9	BM-419324J1	MOTOR SDV-0302A
10	ZS-467796	PAN26X12STL CMT
11	ZS-425694J	PAN30X06STL CMT S-GRIP

NOTE :
Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

MECHANISM (1) BLOCK



3. MECHANISM (1) BLOCK

Ref. No.	Part No.	Description
1	BV-424915N00	LEADER(T) BLK G204EA
2	BV-424914N00	LEADER(S) BLK G204EA
3	VT-387394J1	GUIDE ROLLER D8 PART
4	ZS-418616J	PAN20X2.8STL CMT PS1 LEADER
5	ZS-383761J	ST BID26X06STL CMT
6	MZ-420065N	HOLDER PINCH
7	ZG-420095N	SP PULL REVIEW BRAKE
8	ML-420092N	REVIEW BRAKE PART
9	ML-420102N	ARMT.U BRAKE
10	ZG-420103N	SP PULL T.U BRAKE
11	ZG-420098N	SP PULL LOADING BRAKE
12	ML-420097N	ARM LOADING BRAKE
13	MT-424632N	DISK(2) PART
14	ZW-424667N	REEL WASHER · (SG)
15	ML-420089N	MAIN BRAKE(T)PART
16	ML-420086N	MAIN BRAKE(S)PART
17	ZG-420091N	SP PULL MAIN BRAKE
18	ZS-389950J	PT BID26X10STL CMT
19	HE-422168J	HEAD E HVFHF0032A
20	ZW-395919J	SLIT W16X035X025 PSL
21	MR-420022N	ROLLER IMPEDANCE
22	ML-420006N	ARMTENSION PART
23	MZ-420016N	TENSION BAND PART
24	ZG-420015N	SP PULL TENSION(1)
25	ML-420416N	LEVERTENSION(1)PART
26	BL-420054N	ARM PINCH ROLLER PART
27	ZG-420062N	SP PULL PINCH
28	ML-420061N	LEVER PINCH
29	MZ-420064N	GEAR CAM HELICAL
30	MZ-420066N	GEAR CAM PINCH
31	MZ-420067N	GEAR PINCH
32	MZ-420132N	PRISM LED
33	ML-420168N	SLIDER FRONT LOADING
34	ZG-420169N	SP TORSION SLIDER
35	HR-416732J	HEAD COMBO HVMZA1161A
36	ZS-550708	PAN26X08STL NI3
37	ZS-422170J	PAN26X07STL CMT CP
38	ZG-424556J	SP PUSH A/C(2)
39	ZS-418480J	PAN20X2.2STL BZN PS1
40	ZS-362533	ST PAN30X05STL CMT C080
41	ZW-350839	N30 NYLON
42	ZW-324417	PW31X060X050PSL
43	ML-420068N	ARM REVIEW PART
44	ZG-420071N	SP TORSION REVIEW
45	ZS-358936	ST BID30X06STL CMT
46	MZ-420172N	PLATE UPPER
47	ML-420170N	ARM LID OPENER
48	MI-420023N	ARM IDLER PART
49	BV-424919N00	CASSETTE LOAD BLK G204EA
50	ZG-420167N	SP PULL DUMPER(T)
51	ZG-420162N	SP PLATE UPPER
52	ZG-420166N	SP PULL DUMPER(S)
53	BL-424913N00	ARM LOADING BLK G204EA
59	BB-421838N01	MECHA DECK G215EK

NOTE :

Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

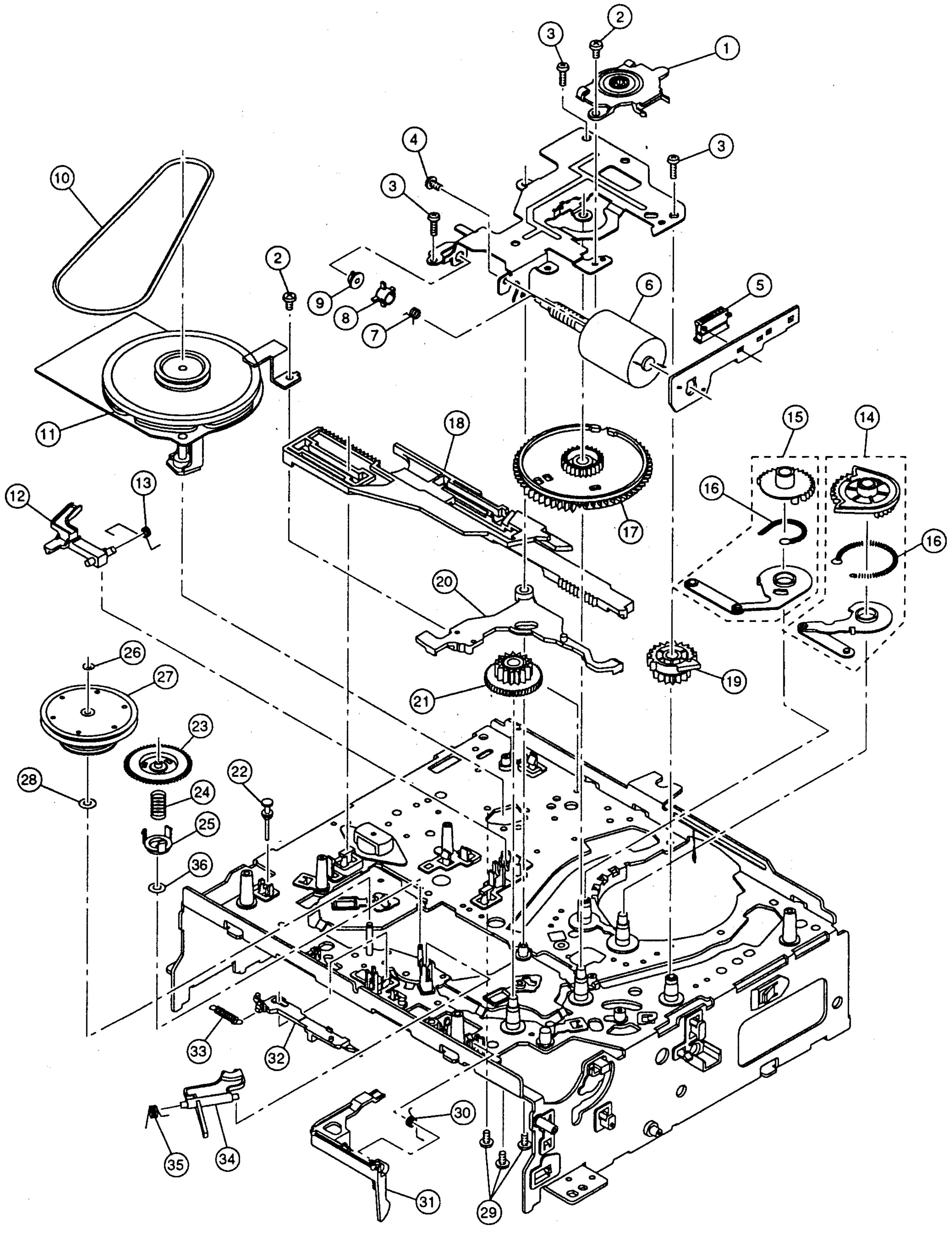
4. MECHANISM (2) BLOCK

Ref. No.	Part No.	Description
1	ES-419326J	<SW MODE SELECT MMS00201ZMB0>
2	ZS-358936	ST BID30X06STL CMT
3	ZS-389950J	PT BID26X10STL CMT
4	ZS-425981	BID30X03STL CMT
5	EJ-422169J	SOCKET TKC-M07X-A1 7P
6	BM-421746N	MOTOR PART
7	ZG-420105N	SP TRIGGER
8	MR-420106N	PULLEY TRIGGER
9	MR-420109N	HOLDER THRUST WORM
10	MB-420053N	BELT CAPSTAN
11	BM-419269N	MOTOR SCV-0602A
12	ML-420126N	CAPSTAN BRAKE PART
13	ZG-420129N	SP TORSION C.B
14	MZ-424917N00	GEAR TOGGLE (S) BLK G204EA
15	MZ-424916N00	GEAR TOGGLE (T) BLK G204EA
16	ZG-420117N	SP PULL TOGGLE
17	MZ-420122N	GEAR CAM MAIN
18	ML-420110N	SLIDER PINCH
19	MZ-420124N	GEAR FRONT LOADING
20	ML-420099N	LEVER M BRAKE
21	MZ-420123N	GEAR WORM WHEEL
22	MZ-420135N	SLIDE S-SW
23	MZ-420035N	GEAR COUPLING
24	ZG-420036N	SP PUSH COUPLING
25	MI-420037N	DISK COUPLING
26	ZW-418816J	SLIT W21X050X050PSL
27	MI-420038N	DISK CLUTCH PART
28	ZW-389923J	PW26X060X050PSL
29	ZS-432843	PAN26X04STL CMT
30	ZG-420134N	SP TORSION REC-S
31	ML-420133N	LEVER REC-S
32	ML-420100N	SLIDER TRIGGER
33	ZG-420101N	SP PULL TRIGGER
34	ML-420033N	ARM COUPLING
35	ZG-420034N	SP TORSION COUPLING
36	ZW-321317	PW21X040X050PSL

NOTE :

Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

MECHANISM (2) BLOCK



5. P.C. BOARD BLOCK

Ref. No.	Part No.	Description
1-A	BA-V1190A600A	PC(#) MAIN BLK G705EA-D
1-B	BA-V1190Q600G	FR PC(#) MAIN BLK G705EOH-D(Y1)
1-C	BA-V1190A600B	PC(#) MAIN BLK G711EDG
1-D	BA-V1190Q600F	FR PC(#) MAIN BLK G712EOG-D [EOG]
1-E	BA-V1190Q600C	FR PC(#) MAIN BLK G715EK-N
1-F	BA-V1190Q600E	FR PC(#) MAIN BLK G715EO-D
1-G	BA-V1190Q600L	FR PC(#) MAIN BLK G715EOHDN(Y1)
1-H	BA-V1190Q600K	FR PC(#) MAIN BLK G715EOHDN(Y2)
1-I	BA-V1190A600J	PC(#) MAIN BLK G715EOH-N
2-A	BA-V1190A610A	PC(#)PRE-HIFI BLK G705EA-D [EXCEPT EK,EOH-N/DN]
2-B	BA-V1190A610B	PC(#)PRE-HIFI BLK G715EK-N [EK,EOH-N/DN]
3-A	BA-V1184S500G	SG PC POWER BLK G705EOH-D [EXCEPT EOG]
3-B	BA-V1184S500H	SG PC POWER BLK G717EOG-D [EOG]
4-A	BA-V1190Q650A	FR PC D-NICAM BLK G715EK-N/FR [EK]
4-B	BA-V1190A650B	PC D-NICAM BLK G715EOH-N [EOH-N]
4-C	BA-V1190A650C	PC D-NICAM BLK G715EOH-DN(Y2) [EOH-DN]

PC (#) MAIN BLK CONSISTS OF FOLLOWING P.C. BOARDS.

- MAIN P.C. BOARD
- TR (A) P.C. BOARD
- TR (B) P.C. BOARD
- VIF UNIT

PC (#) PRE-HIFI BLK CONSISTS OF FOLLOWING P.C. BOARDS.

- PRE AMP AND HI-FI P.C. BOARD
- OSC P.C. BOARD

6. MAIN P.C. BOARD

Ref. No.	Part No.	Description
C310	✱ EC-416655J	C DBL.LAYER T05 FM0H473Z 5.5DC
D3	ED-307572	D SILICON H 1SS131
D4	ED-307572	D SILICON H 1SS131
D5	ED-307572	D SILICON H 1SS131 [EXCEPT EK]
D6	ED-307572	D SILICON H 1SS131 [EXCEPT EK]
D7	ED-307572	D SILICON H 1SS131 [EOG,EOH]
D8	ED-307572	D SILICON H 1SS131 [EXCEPT EA,EK,EO]
D9	ED-367502	D ZENER H HZS9A1L [EXCEPT EA,EK,EO]
D10	ED-307572	D SILICON H 1SS131 [EO,EOG]
D11	ED-307572	D SILICON H 1SS131 [EO,EOG]
D12	ED-387919J	D ZENER H HZS6A1L
D13	ED-307572	D SILICON H 1SS131
D201	ED-397233J	D ZENER H HZS5C3
D202	✱ ED-422519J	D ZENER H MTZJ4.3B T26
D203	ED-307572	D SILICON H 1SS131
D205	ED-425442J	D ZENER H MTZJ13A T26
D206	ED-307572	D SILICON H 1SS131
D207	ED-307572	D SILICON H 1SS131
D299	ED-307572	D SILICON H 1SS131 [EXCEPT EK,EOG,EOH-DN[Y1]
D301	ED-307572	D SILICON H 1SS131
D302	ED-307572	D SILICON H 1SS131
D303	ED-425605J	D ZENER H MTZJ4.7B T26
D304	ED-404220J	D ZENER H MTZJ9.1B T26
D305	ED-307572	D SILICON H 1SS131
D306	ED-422519J	D ZENER H MTZJ4.3B T26
D307	ED-307572	D SILICON H 1SS131
D402	ED-405604J	D ZENER H MTZJ4.3C T26
D403	ED-307572	D SILICON H 1SS131
D404	✱ ED-511907	D SILICON 1N4002 100/1.0A
D405	✱ ED-511907	D SILICON 1N4002 100/1.0A
D406	✱ ED-511907	D SILICON 1N4002 100/1.0A
D407	✱ ED-511907	D SILICON 1N4002 100/1.0A
D408	ED-422251J	D LED GL528VTB INFRARED T05
D409	ED-390012J	D LED GL4800 INFRARED
D410	ED-390012J	D LED GL4800 INFRARED
D411	ED-427218J	D ZENER H MTZJ6.2C T26
D601	ED-307572	D SILICON H 1SS131
D603	ED-307572	D SILICON H 1SS131 [EDG]
D604	ED-307572	D SILICON H 1SS131
D605	ED-307572	D SILICON H 1SS131
D606	ED-307572	D SILICON H 1SS131
D607	ED-307572	D SILICON H 1SS131
DL601	EH-416491J	DL EFDJLA13A [EXCEPT EOG]
FL602	EO-422362J	COIL TUN 1 V1184-049B VCO
FR201	✱ ER-408829J	R FUSE V T05 RF25SCVTP1/4WR11K
FR202	✱ ER-400728J	R FUSE V T05 RF25SCVTP1/4WR12K
FR401	✱ ER-418648J	R FUSE V T05 RF25SCVTP1/4WR24K
FR402	✱ ER-418648J	R FUSE V T05 RF25SCVTP1/4WR24K
FR403	✱ ER-400729J	R FUSE V T05 RF25SCVTP1/4WR47K
IC1	EI-389622J	IC L5631
IC2	✱ EI-422131J	IC AN7809F
IC201	✱ EI-418723J	IC NJM4558DX
IC301	EI-425246J1	IC UPD75217GF-647-3BE AHXOPP2
IC302	EI-416691J	IC XC61AC3002TH T05
IC401	EI-425324J1	IC M37770M4H-163FP AHXSYP2
IC402	EI-425668J	IC 24LC02B/SN
IC403	EI-425537J	IC LA6358NM
IC404	EI-403233J	IC LB1641
IC601	EI-422151J	IC AN3558FBS
IC602	EI-394856J	IC LC8992
IC603	EI-419157J	IC LC74760-9044
IC604	EI-422090J	IC SAA5233P [EK,EOG,EOH-DN[Y1]]
IF1-A	BV-422570J	VIF UNIT AHX EA [EA]

Ref. No.	Part No.	Description
IF1-B	BV-422576J	VIF UNIT AHX EOHD [EOH-D]
IF1-C	BV-422132J	VIF UNIT AX EDG [EDG]
IF1-D	BV-427235J	VIF UNIT AHX TEK EOG [EOG]
IF1-E	BV-422571J	VIF UNIT AHX EK [EK]
IF1-F	BV-422574J	VIF UNIT AHX EOG [EO]
IF1-G	BV-422575J	VIF UNIT AHX EOHN [EOH-N/DN]
L1	EO-381189J	COIL FIX 1 EL0405SKI 100K
L3	EO-376860	COIL FIX 1 LF-5.0S F05 820K [EXCEPT EK]
L4	EO-381189J	COIL FIX 1 EL0405SKI 100K [EXCEPT EA,EK]
L5	EO-381189J	COIL FIX 1 EL0405SKI 100K [EA,EK]
L201	* EO-422134J	COIL FIX 2 PC7-330K 330K
L202	* EO-422134J	COIL FIX 2 PC7-330K 330K
L203	EO-422134J	COIL FIX 2 PC7-330K 330K
L301	EO-381189J	COIL FIX 1 EL0405SKI 100K
L402	EO-392660J	COIL FIX 1 EL0405SKI 220K
L403	EO-404430J	COIL FIX 1 SPT0203SA T26 101J
L601	EO-418521J	COIL FIX 1 LAP02TA T26 121J
L602	EO-404430J	COIL FIX 1 SPT0203SA T26 101J
L603	EO-410090J	COIL FIX 1 SPT0203SA T26 8R2J
L604	EO-414622J	COIL FIX 1 EL0607RA T05 101K
L605	EO-418521J	COIL FIX 1 LAP02TA T26 121J
L606	EO-414616J	COIL FIX 1 LAP02TA T26 270J
L609	EO-410089J	COIL FIX 1 SPT0203SA T26 6R8J
L610	EO-345881	COIL FIX 1 EL0606SKI 101J
L611	EO-410100J	COIL FIX 1 SPT0203SA T26 560J
L612	EO-414622J	COIL FIX 1 EL0607RA T05 101K
L613	EO-410100J	COIL FIX 1 SPT0203SA T26 560J
L614	EO-410103J	COIL FIX 1 SPT0203SA T26 151J
L615	EO-410090J	COIL FIX 1 SPT0203SA T26 8R2J
L616	EO-388087J	COIL FIX 1 LF-5.0S F05 331K
L617	EO-410100J	COIL FIX 1 SPT0203SA T26 560J
L618	EO-410093J	COIL FIX 1 SPT0203SA T26 150J
L619	EO-376616	COIL FIX 1 LF-5.0S F05 221K
L620	EO-410094J	COIL FIX 1 SPT0203SA T26 180J
L621	EO-410101J	COIL FIX 1 SPT0203SA T26 680J
L622	EO-410093J	COIL FIX 1 SPT0203SA T26 150J [EXCEPT EOG]
L623	EO-410089J	COIL FIX 1 SPT0203SA T26 6R8J
L624	EO-410091J	COIL FIX 1 SPT0203SA T26 100J
L625	EO-345876	COIL FIX 1 EL0606SKI 470J
L626	EO-412317J	COIL FIX 1 LAP02TA T26 4R7J [EK,EOG,EOH-DN[Y1]]
L627	EO-410099J	COIL FIX 1 SPT0203SA T26 470J
L628	EO-414616J	COIL FIX 1 LAP02TA T26 270J
L630	EO-418521J	COIL FIX 1 LAP02TA T26 121J
L631	EO-410101J	COIL FIX 1 SPT0203SA T26 680J
MD1-A	BV-403409J	RF CONVERTER MDLK6D755A EO [EXCEPT EA,EDG,EK]
MD1-B	BV-387610J1	RF CONVERTER YAA21-0809G EA [EA]
MD1-C	BV-425222J	RF CONVER. YAA21-1001G G/K EDG [EDG]
MD1-D	BV-403410J	RF CONVERTER MDLK6B733A EK [EK]
P316	EJ-422578J	PLUG TRC-X10P-A2 10P
P317	EJ-422579J	PLUG TRC-X24P-A2 24P
P401	EJ-422061J	SOCKET 00 6216 018 100 18P
P420	EJ-422178J	PLUG TKC-G08P-A1 8P
P453	EJ-422176J	PLUG TKC-M07P-B1 7P
P603	EJ-422563J	SOCKET HLEM16R-1 16P
SW401	ES-422247J	SW MICRO MPU10181MLB0
SW402	ES-422247J	SW MICRO MPU10181MLB0
TH201	* EX-412521J	THERMISTOR 911P83E101NH07 T05
TR1	ET-414836J	TR CHIP UN2213 TXT08E [EA]
TR2	ET-416932J	TR CHIP 2SB709A R,S TXT08E [EA]
TR3	ET-397160J	TR 2SC3330 R,S,T,U,V [EXCEPT EK]
TR4	ET-397160J	TR 2SC3330 R,S,T,U,V
TR6	ET-416932J	TR CHIP 2SB709A R,S TXT08E
TR7	ET-414816J	TR 2SC2668 Y T05
TR8	ET-353899	TR 2SA1317 S,T,U
TR9	ET-353899	TR 2SA1317 S,T,U [EXCEPT EK]
TR10	ET-353899	TR 2SA1317 S,T,U [EXCEPT EK]
TR11	ET-416932J	TR CHIP 2SB709A R,S TXT08E [EXCEPT EK]
TR12	ET-421941J	TR UN4213 T05 [EXCEPT EK]
TR13	ET-421941J	TR UN4213 T05 [EXCEPT EK]
TR14	ET-397160J	TR 2SC3330 R,S,T,U,V [EXCEPT EA,EK,EO]
TR15	ET-360400	TR UN4210 [EXCEPT EA,EK,EO]
TR16	ET-421939J	TR UN4211 T05
TR17	ET-397160J	TR 2SC3330 R,S,T,U,V
TR18	ET-397160J	TR 2SC3330 R,S,T,U,V
TR19	ET-353899	TR 2SA1317 S,T,U [EA,EK,EO]
TR20	ET-397160J	TR 2SC3330 R,S,T,U,V
TR21	ET-416932J	TR CHIP 2SB709A R,S TXT08E
TR201	ET-422464J	TR C.2SD2118 Q,R,S FPTLT16E
TR203	* ET-404498J	TR 2SB1306 Q,R T05
TR205	* ET-422154J	TR 2SB1426 Q,R T05
TR206	ET-373391	TR DTC143ZS
TR207	ET-373391	TR DTC143ZS [EK,EOG,EOH-DN[Y1]]
TR209	ET-373391	TR DTC143ZS
TR210	ET-353899	TR 2SA1317 S,T,U
TR299	ET-416933J	TR CHIP 2SD601A R,S TXT08E [EXCEPT EK,EOG,EOH-DN[Y1]
TR301	ET-421941J	TR UN4213 T05
TR302	ET-422031J	TR UN4210 R,S T05
TR303	ET-415140J	TR DTA115TS T05
TR304	ET-422254J	TR UN4117 R,S T05
TR401	ET-421990J	TR CHIP UN2211 TXT08E
TR402	ET-419710J	TR UN4113 T05
TR403	ET-414836J	TR CHIP UN2213 TXT08E
TR404	ET-353899	TR 2SA1317 S,T,U
TR405	ET-390009J	TR PHOTO PT493F
TR406	ET-390009J	TR PHOTO PT493F
TR407	ET-390010J	TR PHOTO PT4800
TR408	ET-390010J	TR PHOTO PT4800
TR409	ET-353899	TR 2SA1317 S,T,U
TR410	ET-421977J	TR CHIP UN2113 TXT08E
TR411	* ET-422154J	TR 2SB1426 Q,R T05
TR412	ET-421990J	TR CHIP UN2211 TXT08E
TR413	ET-421977J	TR CHIP UN2113 TXT08E
TR414	ET-421990J	TR CHIP UN2211 TXT08E
TR601	ET-414836J	TR CHIP UN2213 TXT08E
TR603	ET-397160J	TR 2SC3330 R,S,T,U,V
TR604	ET-421941J	TR UN4213 T05
TR608	ET-416933J	TR CHIP 2SD601A R,S TXT08E
TR609	ET-421977J	TR CHIP UN2113 TXT08E [EXCEPT EA,EK]
TR610	ET-421939J	TR UN4211 T05 [EXCEPT EA,EK]
TR611	ET-397160J	TR 2SC3330 R,S,T,U,V
TR612	ET-421974J	TR CHIP UN2111 R,S TXT08E [EDG]
TR617	ET-421945J	TR UN4216 R,S T05
TR618	ET-414836J	TR CHIP UN2213 TXT08E
TR619	ET-353899	TR 2SA1317 S,T,U
TR620	ET-416932J	TR CHIP 2SB709A R,S TXT08E
TR621	ET-421984J	TR CHIP UN211D TXT08E
TR622	ET-421945J	TR UN4216 R,S T05 [EXCEPT EA,EK]
TR623	ET-416933J	TR CHIP 2SD601A R,S TXT08E
TR624	ET-421999J	TR CHIP UN221D TXT08E
TR625	ET-397160J	TR 2SC3330 R,S,T,U,V
TR626	ET-397160J	TR 2SC3330 R,S,T,U,V
TR627	ET-353899	TR 2SA1317 S,T,U
TR628	ET-416933J	TR CHIP 2SD601A R,S TXT08E

Ref. No.	Part No.	Description
TR629	ET-421941J	TR UN4213 T05
TR630	ET-364040	TR UN421D
TR631	ET-421944J	TR UN4215 R,S T05
TR632	ET-421939J	TR UN4211 T05 [EXCEPT EA,EK]
TR633	ET-397160J	TR 2SC3330 R,S,T,U,V
TR634	ET-414836J	TR CHIP UN2213 TXT08E
TR635	ET-421999J	TR CHIP UN221D TXT08E
TR636	ET-414836J	TR CHIP UN2213 TXT08E
TR637	ET-422254J	TR UN4117 R,S T05 [EDG]
TR639	ET-421941J	TR UN4213 T05 [EDG]
TR640	ET-353899	TR 2SA1317 S,T,U
TR642	ET-416933J	TR CHIP 2SD601A R,S TXT08E
TR643	ET-353899	TR 2SA1317 S,T,U
TR644	ET-416932J	TR CHIP 2SB709A R,S TXT08E
TR647	ET-416932J	TR CHIP 2SB709A R,S TXT08E
TR648	ET-416932J	TR CHIP 2SB709A R,S TXT08E
TR649	ET-397160J	TR 2SC3330 R,S,T,U,V
TR650	ET-397160J	TR 2SC3330 R,S,T,U,V
TR652	ET-421941J	TR UN4213 T05
TR653	ET-421941J	TR UN4213 T05
TR654	ET-414836J	TR CHIP UN2213 TXT08E
TR655	ET-416932J	TR CHIP 2SB709A R,S TXT08E
TR657	ET-421984J	TR CHIP UN211D TXT08E
TU1-A	EE-387600J2	TV TUNER TERS1-002C EA [EA]
TU1-B	EE-416524J1	TV TUNER TEKE4-034B EOG [EDG,EOG]
TU1-C	EE-387607J1	TV TUNER TERB1-008B EK [EK]
TU1-D	EE-387604J3	TV TUNER TERE1-007D EOG [EO]
TU1-E	EE-412395J	TV TUNER ENV-578C9F1 EOH [EOH]
VR601	EV-389482J	R S-FIX H T05EVNDXAA03 0.1W682
VR602	EV-389478J	R S-FIX H T05EVNDXAA03 0.1W153
VR603	EV-389476J	R S-FIX H T05EVNDXAA03 0.1W103
VR604	EV-389476J	R S-FIX H T05EVNDXAA03 0.1W103
VR605	EV-397433J	R S-FIX H T05EVNDXAA03 0.1W152
VR607	EV-389476J	R S-FIX H T05EVNDXAA03 0.1W103
VR608	EV-389480J	R S-FIX H T05EVNDXAA03 0.1W332
X301	EI-418824J	OSC CE W/C FCR4.19MC5 4.190MHZ
X302	EI-368825M	OSC X'TAL C-002RX 32.768KHZ
X401	EI-425240J	OSC X'TAL APS-1011A 16.000MHZ
X601	EI-422510J	OSC X'TAL HC-49/U 4433.619KHZ
X602	EI-416872J	OSC X'TAL APS1004A 17.734475MH
X603	EI-422092J	OSC X'TAL APS1008 3RD27.000MHZ [EK,EOG,EOH-DN[Y1]]
1	SZ-420137J	HOLDER S/E SENSOR
2	SZ-420136J	HOLDER PHOTO SENSOR
3	SZ-423208J	HOLDER LED

7. TR (A) P.C. BOARD

Ref. No.	Part No.	Description
TR202	✱ET-422511J	TR 2SD2375 P

8. TR (B) P.C. BOARD

Ref. No.	Part No.	Description
TR399	✱ET-422511J	TR 2SD2375 P

9. VIF UNIT (EXCEPT EDG)

Ref. No.	Part No.	Description
CF1-A	EH-732529J	FILTER CE SAF31.4MC70Z [EA]
CF1-B	EH-732528J	FILTER CE SAF33.4MC70Z [EO,EOG,EOH-D]
CF1-C	EH-733747J	FILTER CE SAF32.9MC70Z [EK]
CF1-D	EH-733748J	FILTER CE SAF33.0MC70Z [EOH-N/DN]
CF2-A	EH-373916	FILTER CE SAF36.9MZ70Z [EA]
CF2-B	EH-730625J	FILTER CE SAF38.9MZW70Z [EO,EOG,EOH]
CF2-C	EH-373917	FILTER CE SAF39.5MZ70Z [EK]
CF3-A	EH-368948	FILTER CE TPS5.5MW 5.5000MHZ [EA,EO,EOG,EOH]
CF3-B	EH-733749J	FILTER CE TPS6.0MB2 [EK]
CF4-A	EH-416920J	FILTER CE SFT6.0MA [EK]
CF4-B	EH-394948J	FILTER CE SFT5.5MA [EOH-N/DN]
D1	ED-733546J	D VARACTOR CHIP HVU202A3TRF [EOH]
IC1-A	EI-729997J	IC LA7575 [EA,EO,EOG,EOH-D]
IC1-B	EI-733547J	IC LA7577 [EK,EOH-N/DN]
L1	EO-725824J	COIL 6F16185A1 [EO,EOG]
L2	EO-725825J	COIL 6F16186A1 [EO,EOG]
L3-A	EO-381188J	COIL FIX 1 EL0405SKI 1R0K [EA]
L3-B	EO-391141J	COIL FIX 1 EL0405SKI R47M [EK,EOH]
L4-A	EO-392817J	COIL FIX 1 EL0405SKI 1R2K [EA,EO,EOG,EOH-D]
L4-B	EO-381188J	COIL FIX 1 EL0405SKI 1R0K [EK,EOH-N/DN]
L5	EO-388160J	COIL FIX 1 EL0405SKI 1R8K [EA,EK,EOH]
L6-A	EO-732831J	COIL 6F16437A2 [EK]
L6-B	EO-388160J	COIL FIX 1 EL0405SKI 1R8K [EO,EOG]
L6-C	EH-733514J	COIL 6F16437A1 [EOH-N/DN]
L7-A	EO-732832J	COIL 6F16435A1 [EK,EO,EOG,EOH]
L7-B	EH-733515J	COIL 6F16436A2 [EA]
L8-A	EO-732656J	COIL OSC 6F16403B1 [EK,EO,EOG,EOH]
L8-B	EO-732526J	COIL OSC 6F16403A2 [EA]
L9	EO-387781J	COIL FIX 1 EL0405SKI 120K
L10	EO-381196J	COIL FIX 1 EL0405SKI 470K
Q1	ET-731437J	TR CHIP DTC114EK [EO,EOG]
Q2	ET-731437J	TR CHIP DTC114EK [EO,EOG]
Q3	ET-725820J	TR CHIP 2SC2735J
Q6	ET-370819	TR CHIP 2SC3052
Q7	ET-370818	TR CHIP 2SA1235 [EK,EOH-N/DN]
VR1	EV-404266J	R S-FIX H RH0681C 0.3W 223
VR2	EV-404266J	R S-FIX H RH0681C 0.3W 223 [EO,EOG]
VR3	EV-733548J	R S-FIX H RH063EC14 015 103 [EK,EOH-N/DN]

10. VIF UNIT (EDG)

Ref. No.	Part No.	Description
CF1	EH-733563J	FILTER CE SAF38.9MZC70Z
CF2	EH-376338	FILTER CE TPS6.5MB
CF3	EH-368948	FILTER CE TPS5.5MW 5.5000MHZ
CF4	EH-729986J	FILTER CE TPS5.5MB2
CF51	EH-412432J	FILTER CE SFSH6.5MDB 6.500MHZ
CF52	EH-368827	FILTER CE SFS5.5MD 5.500MHZ
CF53	EH-373921	FILTER CE SFE6.0MB
IC1	EI-368809	IC M51496P
L1	EO-387782J	COIL FIX 1 EL0405SKI 2R2K
L2	EO-732831J	COIL 6F16437A2
L3	EO-732832J	COIL 6F16435A1
L4	EO-732833J	COIL 6F16436A1
L5	EO-397238J	COIL FIX 1 EL0405SKI 6R8K
L6	EO-387798J	COIL FIX 1 EL0405SKI 150K
L51	EO-396361J	COIL FIX 1 EL0405SKI 8R2K
L52	EO-387803J	COIL FIX 1 EL0405SKI 221K
Q1	ET-725820J	TR CHIP 2SC2735J
Q2	ET-370818	TR CHIP 2SA1235
Q3	ET-370819	TR CHIP 2SC3052
Q4	ET-370818	TR CHIP 2SA1235
Q51	ET-370819	TR CHIP 2SC3052
Q52	ET-370819	TR CHIP 2SC3052
VR1	EV-389479J	R S-FIX H T05EVNDXAA03 0.1W223
VR2	EV-396023J	R S-FIX H T05EVNDXAA03 0.1W222
X1	EI-368829	OSC CE CSB512P

11. IN/OUT (A) P.C. BOARD

Ref. No.	Part No.	Description
D2	ED-307572	D SILICON H 1SS131
D3	ED-307572	D SILICON H 1SS131
PJ1	EJ-389864J	SOCKET M1817 21P [EXCEPT EA]
PJ2	EJ-389915J	SOCKET M1817-A 21P [EOH-DN[Y2]]
PJ3	EJ-422097J	PIN J JPJ1131-010040 1P [EA]
PJ4	EJ-418853J	PIN J JPJ1131-010030 1P [EA]
PJ5	EJ-418854J	PIN J JPJ1131-010020 1P [EA]
PJ6	EJ-422552J	PIN J JPJ2202-01-040 1P [EA]
PJ7	EJ-422553J	PIN J JPJ2202-01-030 1P
PJ8	EJ-422554J	PIN J JPJ2202-01-020 1P
TR1	ET-397160J	TR 2SC3330 R,S,T,U,V [EXCEPT EA]
TR2	ET-397160J	TR 2SC3330 R,S,T,U,V [EXCEPT EA]
TR3	ET-397160J	TR 2SC3330 R,S,T,U,V [EOH-DN[Y2]]
TR4	ET-397160J	TR 2SC3330 R,S,T,U,V [EOH-DN[Y2]]
TR5	ET-397160J	TR 2SC3330 R,S,T,U,V [EA]
TR6	ET-397160J	TR 2SC3330 R,S,T,U,V [EA]

12. IN/OUT (B) P.C. BOARD

Ref. No.	Part No.	Description
IC102	EI-408961J	IC MM1031XS [EOH-DN[Y2]]
IC103	EI-332259	IC TC4052BP
IC104	EI-416646J	IC MM1113XS
L101	EO-345880	COIL FIX 1 EL0606SKI 820J
L102	EO-345880	COIL FIX 1 EL0606SKI 820J
L103	EO-345880	COIL FIX 1 EL0606SKI 820J
TR101	ET-421941J	TR UN4213 T05
TR102	ET-421941J	TR UN4213 T05
TR103	ET-353899	TR 2SA1317 S,T,U

13. IN/OUT (C) P.C. BOARD

Ref. No.	Part No.	Description
D201	ED-307572	D SILICON H 1SS131
D202	ED-307572	D SILICON H 1SS131 [EXCEPT EA]
IC207	EI-310036	IC TC4066BP [EOH-DN[Y2]]
IC208	EI-416647J	IC MM1111XS [EOH-DN[Y2]]
TR201	ET-397160J	TR 2SC3330 R,S,T,U,V
TR202	ET-397160J	TR 2SC3330 R,S,T,U,V
TR203	ET-419712J	TR UN4115 R,S T05
TR204	ET-421944J	TR UN4215 R,S T05
TR205	ET-421941J	TR UN4213 T05 [EOH-DN[Y2]]
TR251	ET-419710J	TR UN4113 T05 [EOH-DN[Y2]]
TR252	ET-421941J	TR UN4213 T05 [EOH-DN[Y2]]
TR253	ET-422031J	TR UN4210 R,S T05 [EOH-DN[Y2]]
TR256	ET-419710J	TR UN4113 T05 [EXCEPT EA]
TR258	ET-421941J	TR UN4213 T05 [EXCEPT EA]

14. SECAM DET AND NTSC P.C. BOARD (EDG)

Ref. No.	Part No.	Description
D321	ED-307572	D SILICON H 1SS131
D351	ED-307572	D SILICON H 1SS131
IC311	EI-366892	IC BA7025L
IC351	EI-200573	IC TC4053BP
IC352	EI-356457	IC BU4013B
L301	EO-345881	COIL FIX 1 EL0606SKI 101J
L311	EO-368129	COIL FIX 1 TL-8 153J
SF311	EH-366894	FILTER CE SFE-4.16MB 4.16MHZ
TR311	ET-397160J	TR 2SC3330 R,S,T,U,V
TR351	ET-421941J	TR UN4213 T05
TR352	ET-397160J	TR 2SC3330 R,S,T,U,V
TR353	ET-397160J	TR 2SC3330 R,S,T,U,V
TR354	ET-397160J	TR 2SC3330 R,S,T,U,V
TR355	ET-397160J	TR 2SC3330 R,S,T,U,V

15. PRE AMP AND HI-FI P.C. BOARD

Ref. No.	Part No.	Description
D2	ED-307572	D SILICON H 1SS131
D3	ED-307572	D SILICON H 1SS131
D4	ED-307572	D SILICON H 1SS131
D5	ED-307572	D SILICON H 1SS131
D6	ED-307572	D SILICON H 1SS131
D106	ED-307572	D SILICON H 1SS131
D108	ED-360318	D SILICON H MA700
D109	ED-360318	D SILICON H MA700
D112	ED-410157J	D SILICON CHIP MA152WA [EDG]
IC1	EI-416607J	IC AN3386NK-A
IC101	EI-425194J	IC AN3963NFBPA
IC102	EI-425189J	IC AN3317K
L1	EO-414622J	COIL FIX 1 EL0607RA T05 101K
L3	EO-410098J	COIL FIX 1 SPT0203SA T26 390J
L6	EO-376600	COIL FIX 1 LF-5.0S F05 101K
L7	EO-410096J	COIL FIX 1 SPT0203SA T26 220J
L101	EO-376611	COIL FIX 1 LF-5.0S F05 470K
L102	EO-376611	COIL FIX 1 LF-5.0S F05 470K
L103	EO-376611	COIL FIX 1 LF-5.0S F05 470K
L104	EO-392659J	COIL FIX 1 LHL06TB T05 562J
L107	EO-376611	COIL FIX 1 LF-5.0S F05 470K
L108	EO-400782J	COIL FIX 1 EL0606RA T05 222J
L109	EO-400782J	COIL FIX 1 EL0606RA T05 222J
L110	EO-376611	COIL FIX 1 LF-5.0S F05 470K
P3	EJ-422563J	SOCKET HLEM16R-1 16P
P101	EJ-422061J	SOCKET 00 6216 018 100 18P
TH1	∗ EX-405691J	THERMISTOR NTH5D332KA
TR4	ET-416932J	TR CHIP 2SB709A R,S TXT08E
TR5	ET-416933J	TR CHIP 2SD601A R,S TXT08E
TR6	ET-416933J	TR CHIP 2SD601A R,S TXT08E
TR7	ET-414836J	TR CHIP UN2213 TXT08E
TR8	ET-416933J	TR CHIP 2SD601A R,S TXT08E
TR9	ET-416932J	TR CHIP 2SB709A R,S TXT08E
TR10	ET-421993J	TR CHIP UN2215 R,S TXT08E
TR13	ET-414836J	TR CHIP UN2213 TXT08E
TR14	ET-414836J	TR CHIP UN2213 TXT08E
TR15	ET-414836J	TR CHIP UN2213 TXT08E
TR16	ET-421979J	TR CHIP UN2115 R,S TXT08E
TR101	ET-421993J	TR CHIP UN2215 R,S TXT08E
TR102	ET-414836J	TR CHIP UN2213 TXT08E
TR103	ET-421977J	TR CHIP UN2113 TXT08E
TR104	ET-421993J	TR CHIP UN2215 R,S TXT08E
TR105	ET-421993J	TR CHIP UN2215 R,S TXT08E [EK,EOH-N/DN]
TR106	ET-416933J	TR CHIP 2SD601A R,S TXT08E
TR108	ET-414836J	TR CHIP UN2213 TXT08E
TR112	ET-421990J	TR CHIP UN2211 TXT08E
TR115	ET-416932J	TR CHIP 2SB709A R,S TXT08E
TR116	ET-421991J	TR CHIP UN2212 TXT08E
TR118	ET-416932J	TR CHIP 2SB709A R,S TXT08E
TR119	ET-416932J	TR CHIP 2SB709A R,S TXT08E
TR120	ET-421991J	TR CHIP UN2212 TXT08E
TR121	ET-421991J	TR CHIP UN2212 TXT08E
TR122	ET-427131J	TR CHIP DTA115TK
TR131	ET-421991J	TR CHIP UN2212 TXT08E [EDG]
VR1	EV-408710J	R S-FIX V T05EVNDCAA03 0.1W472
VR101	EV-389476J	R S-FIX H T05EVNDXAA03 0.1W103
VR102	EV-389489J	R S-FIX H T05EVNDXAA03 0.1W472

16. OSC P.C. BOARD

Ref. No.	Part No.	Description
D101	ED-307572	D SILICON H 1SS131
D104	ED-427158J	D SILICON CHIP MA153/A TXT08E
FL101	EO-418829J	COIL OSC 1 6062 70.0KHZ
IC103	EI-385995J	IC BA7755A
L106	EO-390716J	COIL FIX 1 LHL06TB T05 272J
TR109	ET-421990J	TR CHIP UN2211 TXT08E
TR110	ET-416933J	TR CHIP 2SD601A R,S TXT08E
TR111	ET-416933J	TR CHIP 2SD601A R,S TXT08E
TR117	ET-416932J	TR CHIP 2SB709A R,S TXT08E

17. OPERATION P.C. BOARD

Ref. No.	Part No.	Description
D1	ED-307572	D SILICON H 1SS131
D2	ED-307572	D SILICON H 1SS131
D3	ED-307572	D SILICON H 1SS131
D4	ED-307572	D SILICON H 1SS131
D5	ED-307572	D SILICON H 1SS131
D6	ED-307572	D SILICON H 1SS131
FL1	EM-422542J	IND FL FIP10CCM7 CHARACTER
P16	EJ-425180J	SOCKET TRC-X10X-A2 10P
P17	EJ-425181J	SOCKET TRC-X24X-A2 24P
PH1	ET-425638J	DETECTOR SBX1815-R2
SW1	ES-408404J	SW TACT EVQ 235 07K T05
SW2	ES-411687J	SW TACT EVQ-PAE05R
SW3	ES-411687J	SW TACT EVQ-PAE05R
SW4	ES-411687J	SW TACT EVQ-PAE05R
SW5	ES-411687J	SW TACT EVQ-PAE05R
SW6	ES-411687J	SW TACT EVQ-PAE05R
SW7	ES-411687J	SW TACT EVQ-PAE05R
SW8	ES-411687J	SW TACT EVQ-PAE05R
SW9	ES-411687J	SW TACT EVQ-PAE05R
SW10	ES-411687J	SW TACT EVQ-PAE05R
SW11	ES-411687J	SW TACT EVQ-PAE05R
SW12	ES-411687J	SW TACT EVQ-PAE05R
TR1	ET-421952J	TR UN421L T05
TR8	ET-421952J	TR UN421L T05

18. FRONT P.C. BOARD

Ref. No.	Part No.	Description
D101	ED-307572	D SILICON H 1SS131
D102	ED-307572	D SILICON H 1SS131
PJ101	EJ-418819J	PIN J JPJ4025-01-040 1P
PJ102-A	EJ-422545J	PIN J JPJ5025-01-030 1P [EA]
PJ102-B	EJ-381863J	PIN J JPJ2025-01-030 WHITE 1P [EXCEPT EA]
PJ103-A	EJ-422546J	PIN J JPJ5025-01-020 1P [EA]
PJ103-B	EJ-381862J	PIN J JPJ2025-01-020 RED 1 P [EXCEPT EA]
TR101	ET-397160J	TR 2SC3330 R,S,T,U,V
TR102	ET-397160J	TR 2SC3330 R,S,T,U,V
TR103	ET-397160J	TR 2SC3330 R,S,T,U,V

19. POWER SUPPLY P.C. BOARD

Ref. No.	Part No.	Description
C1	✱EC-422101J	C MMY V CUT MKTR40 104M 275AC
C2	✱EC-422101J	C MMY V CUT MKTR40 104M 275AC
C3	✱EC-418706J	C CE V CUT CS11 E222M 400AC
C4	✱EC-418706J	C CE V CUT CS11 E222M 400AC
C5	✱EC-418706J	C CE V CUT CS11 E222M 400AC
C6	✱EC-418706J	C CE V CUT CS11 E222M 400AC
C7	✱EC-418706J	C CE V CUT CS11 E222M 400AC
C8	✱EC-418706J	C CE V CUT CS11 E222M 400AC
C9	✱EC-418706J	C CE V CUT CS11 E222M 400AC
C11	✱EC-422103J	C EC V CUT TWSS 470M400.0DC
C12	✱EC-418760J	C CE V T05 FK22 Y5R103K 500DC
C13	✱EC-418759J	C CE V T05 CC45 SL121K1000DC
C14	EC-418841J	C MMY V T05 ECQ-VL2 333J 50DC
C15	✱EC-418841J	C MMY V T05 ECQ-VL2 333J 50DC
C24	EC-418690J	C EC V CUT SXE12 222M 6.3DC
D1	✱ED-422125J	D SILICON 1N4006 T26 800/1.0A
D2	✱ED-422125J	D SILICON 1N4006 T26 800/1.0A
D3	✱ED-422125J	D SILICON 1N4006 T26 800/1.0A
D4	✱ED-422125J	D SILICON 1N4006 T26 800/1.0A
D5	✱ED-418976N	D SILICON EG01CW T05 1000/0.5A
D6	ED-307572	D SILICON H 1SS131
D7	ED-307572	D SILICON H 1SS131
D20	ED-422243N	D SCHOT.AK03WK T05
D21	ED-425207J	D SILICON ERA18-02 T26
D24	ED-425207J	D SILICON ERA18-02 T26
D25	✱ED-422420J	D ZENER H MTZJ20C T26
D27	✱ED-422420J	D ZENER H MTZJ20C T26
D29	ED-422462J	D SCHOTTKY RK49 015-302 S15
D30	ED-422244J	D SCHOTTKY RK34LF-B2 S12
D31	ED-307572	D SILICON H 1SS131
D32	ED-422243N	D SCHOT.AK03WK T05
F1	✱EF-601964	FUSE SET T 250V 1.60A
IC2	EI-422128N	IC TA76431S T05
L1	✱EO-339907	COIL LF FKOB160MH16 1000.0UH [EOG]
L2	✱EO-418689J	COIL LF LF-4DA-333
PH1	✱ET-422113J	PHOTO COUPLER PS2561-1-V
P1	✱EJ-416590J1	SOCKET INLET CCT-2302-0371 2P
R1	✱ER-418739J	R CT P RGG3 3W 4R7K
R2	✱ER-422181J	R OMF H S20 FS ERG3SH 3W 823J
R6	✱ER-422186J	R OMF H S15 FS PR02 2W 151J
R7	✱ER-411836J	R OMF H S15 FS 2W 1R0J
R11	ER-318316	R MF H F10 1/4W 2201F
R12	ER-314600	R MF H 1/4W 1601F
R27	✱ER-386215J	R OMF H S12 FS 1W 220J
T1	✱BT-422117N	TRANS POW V1190 EOG
TR1	✱ET-422118J	TR 2SC4304 O,Y
TR2	✱ET-422129J	TR 2SD2132 U,V T05

20. D-MULTI P.C. BOARD (EA,EO,EOG,EOH-D)

Ref. No.	Part No.	Description
FL1	EH-394947J	FILTER CE SFT5.74MA
FL2	EH-394948J	FILTER CE SFT5.5MA
IC1	EI-389644J	IC BA403
IC2	EI-389644J	IC BA403
IC3	EI-416611J	IC TDA8417
L1	EO-381189J	COIL FIX 1 EL0405SKI 100K
L2	EO-381189J	COIL FIX 1 EL0405SKI 100K
L3	EO-381189J	COIL FIX 1 EL0405SKI 100K
TR1	ET-397160J	TR 2SC3330 R,S,T,U,V
TR2	ET-397160J	TR 2SC3330 R,S,T,U,V
TR3	ET-397160J	TR 2SC3330 R,S,T,U,V
TR4	ET-397160J	TR 2SC3330 R,S,T,U,V
VL1	EO-416928J	COIL TUN 1 V1173-035 5.74
VL2	EO-416926J	COIL TUN 1 V1173-033 5.5
VR1	EV-394962J	R S-FIX H T05EVNDXAA03 0.1W102
X1	EI-425185J	OSC X'TALASP-1006 10.000MHZ

21. D-NICAM P.C. BOARD (EK,EOH-N/DN)

Ref. No.	Part No.	Description
FL1	EH-397511J	FILTER LC BP TH316BQKS-2982QDD [EOH-N/DN]
FL82	EH-382829J	FILTER LC BP TH316BQM-2110QDAF [EK]
FL101	EH-394947J	FILTER CE SFT5.74MA [EOH-DN]
FL102	EH-394948J	FILTER CE SFT5.5MA [EOH-DN]
IC1	EI-425190J	IC TDA8204
IC2	EI-425191J	IC TDA8205
IC101	EI-389644J	IC BA403 [EOH-DN]
IC102	EI-389644J	IC BA403 [EOH-DN]
IC103	EI-416611J	IC TDA8417 [EOH-DN]
L1	EO-381189J	COIL FIX 1 EL0405SKI 100K
L2	EO-381189J	COIL FIX 1 EL0405SKI 100K
L3	EO-381189J	COIL FIX 1 EL0405SKI 100K
L4	EO-381189J	COIL FIX 1 EL0405SKI 100K
L5	EO-381189J	COIL FIX 1 EL0405SKI 100K
L6	EO-381189J	COIL FIX 1 EL0405SKI 100K
L101	EO-381189J	COIL FIX 1 EL0405SKI 100K [EOH-DN]
L102	EO-381189J	COIL FIX 1 EL0405SKI 100K [EOH-DN]
L103	EO-381189J	COIL FIX 1 EL0405SKI 100K [EOH-DN]
TR1	ET-397160J	TR 2SC3330 R,S,T,U,V [EOH-N/DN]
TR2	ET-397160J	TR 2SC3330 R,S,T,U,V [EOH-N/DN]
TR3	ET-421941J	TR UN4213 T05
TR4	ET-422031J	TR UN4210 R,S T05
TR5	ET-397160J	TR 2SC3330 R,S,T,U,V
TR6	ET-397160J	TR 2SC3330 R,S,T,U,V
TR81	ET-397160J	TR 2SC3330 R,S,T,U,V [EK]
TR82	ET-397160J	TR 2SC3330 R,S,T,U,V [EK]
TR101	ET-397160J	TR 2SC3330 R,S,T,U,V [EOH-DN]
TR102	ET-397160J	TR 2SC3330 R,S,T,U,V [EOH-DN]
VL101	EO-416928J	COIL TUN 1 V1173-035 5.74 [EOH-DN]
VL102	EO-416926J	COIL TUN 1 V1173-033 5.5 [EOH-DN]
VR101	EV-394962J	R S-FIX H T05EVNDXAA03 0.1W102 [EOH-DN]
X1	EI-425184J	OSC X'TALAPS-1007 11.648MHZ
X101	EI-425185J	OSC X'TALASP-1006 10.000MHZ [EOH-DN]

22. CDR P.C. BOARD (EOG)

Ref. No.	Part No.	Description
D1	ED-397614J	D ZENER H HZS9A3L T26
D2	ED-307572	D SILICON H 1SS131
D3	ED-307572	D SILICON H 1SS131
DL1	EH-422240J	DL ADL-SN2344Q
IC1	EI-422218J	IC M51494L
IC2	EI-400756J	IC NJM4558L-B
L1	EO-403270J	COIL FIX 1 EL0405RA T05 101J
L2	EO-403270J	COIL FIX 1 EL0405RA T05 101J
L3	EO-410091J	COIL FIX 1 SPT0203SA T26 100J
L4	EO-376609	COIL FIX 1 LF-5.0S F05 270K
TR1	ET-397160J	TR 2SC3330 R,S,T,U,V
TR3	ET-397160J	TR 2SC3330 R,S,T,U,V
TR4	ET-397160J	TR 2SC3330 R,S,T,U,V
TR5	ET-397160J	TR 2SC3330 R,S,T,U,V
TR6	ET-397160J	TR 2SC3330 R,S,T,U,V
TR10	ET-397160J	TR 2SC3330 R,S,T,U,V
TR11	ET-353899	TR 2SA1317 S,T,U
TR12	ET-397160J	TR 2SC3330 R,S,T,U,V
TR13	ET-397160J	TR 2SC3330 R,S,T,U,V
TR14	ET-397160J	TR 2SC3330 R,S,T,U,V
TR15	ET-397160J	TR 2SC3330 R,S,T,U,V
TR16	ET-353899	TR 2SA1317 S,T,U
TR17	ET-397160J	TR 2SC3330 R,S,T,U,V
VR3	EV-405248J	R S-FIX V T05EVNDCAA03 0.1W471
VR4	EV-403988J	R S-FIX V T05EVNDCAA03 0.1W102

23. FINAL ASSEMBLY BLOCK

Ref. No.	Part No.	Description
1	SP-420296J	COVER UPPER AX
2	ZS-427134J	PT BID30X10STL BZN EARTH LOCK
3	ZS-385611J	DT BID26X06STL BNI
4	ZS-362378	PLX BID30X10STL CMT
5	MZ-420496N1	EARTH MECHA (SG)
6	HZ-V1182A200A	HEAD CLEANER BLK G204ES
7	HZ-417681J	ROLLER HEAD CLEANER(2)
8	ZS-407886J	BT PAN30X08STL BZN C100
9-A	SP-422609N	PANEL REAR JACK EOH-DN (SG) [EXCEPT EA,EDG,EOG,EOH-DN
9-B	SP-422608N	PANEL REAR JACK EA-D (SG) [EA]
9-C	SP-422613N	PANEL REAR JACK EDG(2) (SG) [EDG]
9-D	SP-422614N	PANEL REAR JACK EOG-D (SG) [EOG]
9-F	SP-422610N	PANEL REAR JACK EOH-DN(2) (SG) [EOH-DN[Y2]]
10	EW-419012J	CORD SHIELD FFC L150 18P
11	EW-422531J	CORD FFC BD P1.25 L150 16P
12	ZS-383379J	PLX BID30X08STL CMT
13	SZ-420495N	COVER INLET (SG)
15-A	* EW-419249M	AC CORD 200S SE-1 SE-4 B E [EXCEPT EA,EK]
15-B	* EW-419250M	AC CORD 200 S SA-5SA-6 S [EA]
15-C	* EW-419248M	AC CORD 200S SE-5 SE-6 B B [EK]
16	SA-420497J	FOOT AX
17	SZ-407193J	CUSHION MASK(2)
18	ZG-416251M	SP MASK(3) (SG)
19-A	SE-423167N	MASK CASSETTE VS-G705(E) (SG) [EA,EOH-D]
19-B	SE-425166N	MASK CASSETTE VS-G711(E2) (SG) [EDG]
19-C	SE-423176N	MASK CASSETTE VS-G712(G) (SG) [G712EOG]
19-D	SE-423171N	MASK CASSETTE VS-G715(E) (SG) [EK,EO,EOH-N/DN]
19-E	SE-423177N	MASK CASSETTE VS-G717(G) (SG) [G717EOG]
20-A	BD-420309N	PANEL F(F)G705EA-D PART (SG) [EA,EOH-D]
20-B	BD-425157N	PANEL F(F)G711EDG PART (SG)
20-C	BD-423190N	PANEL F(F)G712EOG-D PART (SG)
20-D	BD-423182N	PANEL F(F)G715EK-N PART (SG)
20-E	BD-423183N	PANEL F(F)G715EO-D PART (SG)
20-F	BD-423185N	PANEL F(F)G715EOH-DN(Y1)PART
20-G	BD-425161N	PANEL F(F)G715EOH-DN(Y2) PART
20-H	BD-425159N	PANEL F(F)G715EOH-N PART (SG)
20-I	BD-423192N	PANEL F(F)G717EOG-D PART (SG)

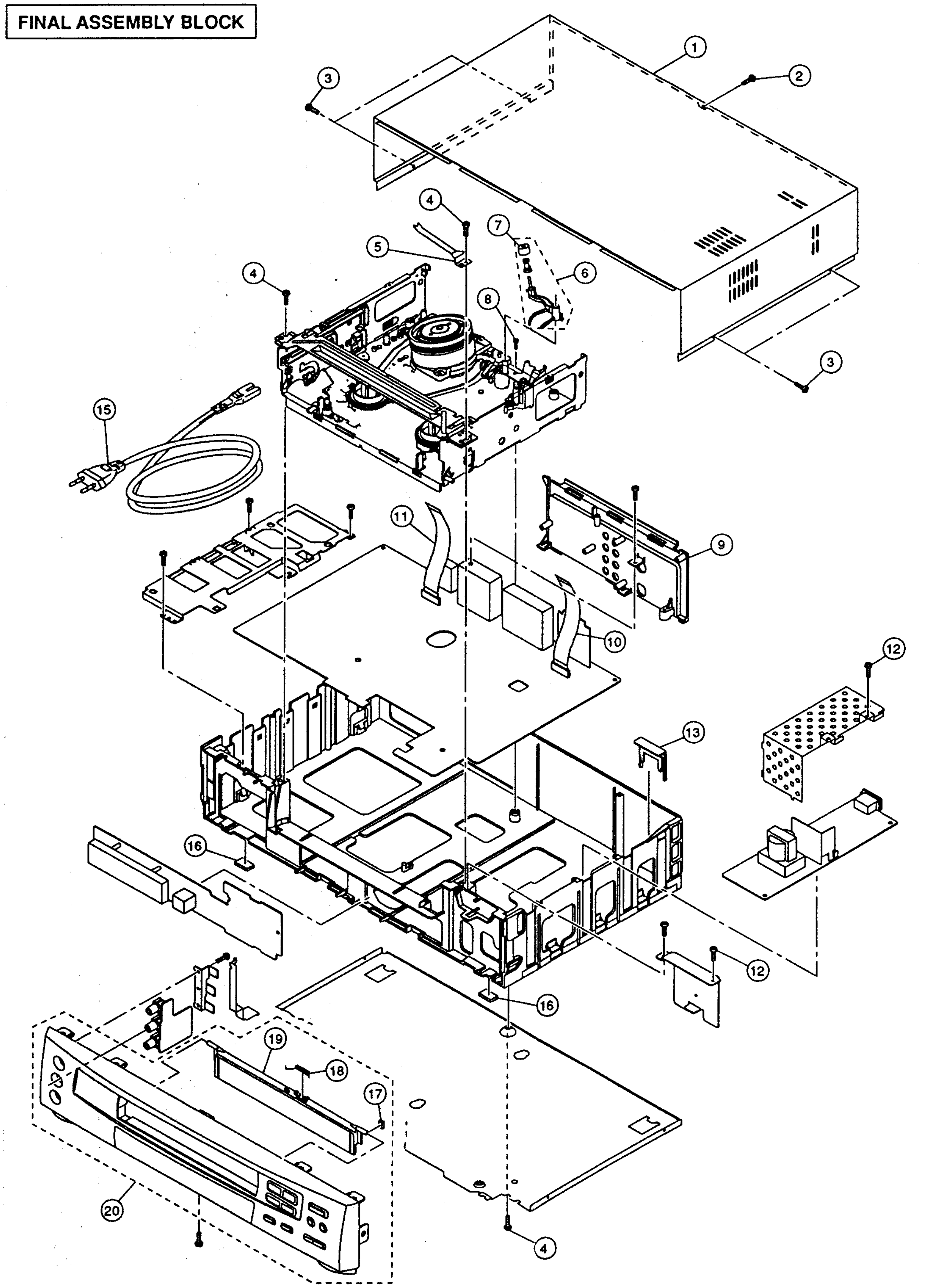
NOTE :

Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

24. ACCESSARY

Ref. No.	Part No.	Description
1	EW-348414	CORD PAL
Ref. No.	**Part No.**	**Description**
2-A	AV-416974M	REMOCON RC-W600E [EA,EOH-D]
2-B	AV-418989N	REMOCON RC-W656E [EDG]
2-C	AV-422505N	REMOCON RC-W556G [G712EOG]
2-D	AV-422507N	REMOCON RC-W566E [EK]
2-E	AV-422508N	REMOCON RC-W576E [EO,EOH-N/DN]
2-F	AV-422509N	REMOCON RC-W576G [G717EOG]
3-A	SP-733737N	LID AX LCD-2 [RC-W656]
3-B	SP-733721N	LID AX LCD-1 [RC-W556]
3-C	SP-733722N	LID AX VIDEO PLUS-1 [RC-W566]
3-D	SP-733723N	LID AX SHOWVIEW-1 [RC-W576]
4	SC-733720N	COVER BATTERY (AX)

FINAL ASSEMBLY BLOCK



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Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.
AV416974M	24-2-A	ED307572	6-D3	ED422420J	19-D25	EI416611J	20-IC3
AV418989N	24-2-B	ED307572	6-D4	ED422420J	19-D27	EI416611J	21-IC103
AV422505N	24-2-C	ED307572	6-D5	ED422462J	19-D29	EI416646J	12-IC104
AV422507N	24-2-D	ED307572	6-D6	ED422519J	6-D202	EI416647J	13-IC208
AV422508N	24-2-E	ED307572	6-D7	ED422519J	6-D306	EI416691J	6-IC302
AV422509N	24-2-F	ED307572	6-D8	ED425207J	19-D21	EI416872J	6-X602
BAV1184S500G	5-3-A	ED307572	6-D10	ED425207J	19-D24	EI418723J	6-IC201
BAV1184S500H	5-3-B	ED307572	6-D11	ED425442J	6-D205	EI418824J	6-X301
BAV1190A600A	5-1-A	ED307572	6-D13	ED425605J	6-D303	EI419157J	6-IC603
BAV1190A600B	5-1-C	ED307572	6-D203	ED427158J	16-D104	EI422090J	6-IC604
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BAV1190A610A	5-2-A	ED307572	6-D207	ED511907	6-D404	EI422128N	19-IC2
BAV1190A610B	5-2-B	ED307572	6-D299	ED511907	6-D405	EI422131J	6-IC2
BAV1190A650B	5-4-B	ED307572	6-D301	ED511907	6-D406	EI422151J	6-IC601
BAV1190A650C	5-4-C	ED307572	6-D302	ED511907	6-D407	EI422218J	22-IC1
BAV1190Q600C	5-1-E	ED307572	6-D305	ED733546J	9-D1	EI422510J	6-X601
BAV1190Q600E	5-1-F	ED307572	6-D307	EE387600J2	6-TU1-A	EI425184J	21-X1
BAV1190Q600F	5-1-D	ED307572	6-D403	EE387604J3	6-TU1-D	EI425185J	20-X1
BAV1190Q600G	5-1-B	ED307572	6-D601	EE387607J1	6-TU1-C	EI425185J	21-X101
BAV1190Q600K	5-1-H	ED307572	6-D603	EE412395J	6-TU1-E	EI425189J	15-IC102
BAV1190Q600L	5-1-G	ED307572	6-D604	EE416524J1	6-TU1-B	EI425190J	21-IC1
BAV1190Q650A	5-4-A	ED307572	6-D605	EF601964	19-F1	EI425191J	21-IC2
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BD420309N	23-20-A	ED307572	6-D607	EH368827	10-CF52	EI425240J	6-X401
BD423182N	23-20-D	ED307572	11-D2	EH368948	9-CF3-A	EI425246J1	6-IC301
BD423183N	23-20-E	ED307572	11-D3	EH368948	10-CF3	EI425324J1	6-IC401
BD423185N	23-20-F	ED307572	13-D201	EH373916	9-CF2-A	EI425537J	6-IC403
BD423190N	23-20-C	ED307572	13-D202	EH373917	9-CF2-C	EI425668J	6-IC402
BD423192N	23-20-I	ED307572	14-D321	EH373921	10-CF53	EI729997J	9-IC1-A
BD425157N	23-20-B	ED307572	14-D351	EH376338	10-CF2	EI733547J	9-IC1-B
BD425159N	23-20-H	ED307572	15-D2	EH382829J	21-FL82	EJ381862J	18-PJ103-B
BD425161N	23-20-G	ED307572	15-D3	EH394947J	20-FL1	EJ381863J	18-PJ102-B
BL420054N	3-26	ED307572	15-D4	EH394947J	21-FL101	EJ389864J	11-PJ1
BL424913N00	3-53	ED307572	15-D5	EH394948J	9-CF4-B	EJ389915J	11-PJ2
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BM419324J1	2-9	ED307572	15-D106	EH394948J	21-FL102	EJ418819J	18-PJ101
BM421746N	4-6	ED307572	16-D101	EH397511J	21-FL1	EJ418853J	11-PJ4
BT422117N	19-T1	ED307572	17-D1	EH412432J	10-CF51	EJ418854J	11-PJ5
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BV422132J	6-IF1-C	ED307572	18-D101	EH732528J	9-CF1-B	EJ422178J	6-P420
BV422570J	6-IF1-A	ED307572	18-D102	EH732529J	9-CF1-A	EJ422545J	18-PJ102-A
BV422571J	6-IF1-E	ED307572	19-D6	EH733514J	9-L6-C	EJ422546J	18-PJ103-A
BV422574J	6-IF1-F	ED307572	19-D7	EH733515J	9-L7-B	EJ422552J	11-PJ6
BV422575J	6-IF1-G	ED307572	19-D31	EH733563J	10-CF1	EJ422553J	11-PJ7
BV422576J	6-IF1-B	ED307572	22-D2	EH733747J	9-CF1-C	EJ422554J	11-PJ8
BV424914N00	3-2	ED307572	22-D3	EH733748J	9-CF1-D	EJ422563J	6-P603
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EC418706J	19-C5	ED404220J	6-D304	EI368829	10-X1	EO345880	12-L101
EC418706J	19-C6	ED405604J	6-D402	EI385995J	16-IC103	EO345880	12-L102
EC418706J	19-C7	ED410157J	15-D112	EI389622J	6-IC1	EO345880	12-L103
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EC418706J	19-C9	ED422125J	19-D1	EI389644J	20-IC2	EO345881	14-L301
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EO381188J	9-L4-B	EO418829J	16-FL101	ET390010J	6-TR408	ET416932J	6-TR6
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EO381189J	6-L4	EO422134J	6-L202	ET397160J	6-TR4	ET416932J	6-TR21
EO381189J	6-L5	EO422134J	6-L203	ET397160J	6-TR14	ET416932J	6-TR620
EO381189J	6-L301	EO422362J	6-FL602	ET397160J	6-TR17	ET416932J	6-TR644
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EO381189J	21-L1	EO732656J	9-L8-A	ET397160J	6-TR611	ET416932J	15-TR4
EO381189J	21-L2	EO732831J	9-L6-A	ET397160J	6-TR625	ET416932J	15-TR9
EO381189J	21-L3	EO732831J	10-L2	ET397160J	6-TR626	ET416932J	15-TR115
EO381189J	21-L4	EO732832J	9-L7-A	ET397160J	6-TR633	ET416932J	15-TR118
EO381189J	21-L5	EO732832J	10-L3	ET397160J	6-TR649	ET416932J	15-TR119
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EO381189J	21-L102	ER318316	19-R11	ET397160J	11-TR2	ET416933J	6-TR608
EO381189J	21-L103	ER386215J	19-R27	ET397160J	11-TR3	ET416933J	6-TR623
EO381196J	9-L10	ER400728J	6-FR202	ET397160J	11-TR4	ET416933J	6-TR628
EO387781J	9-L9	ER400729J	6-FR403	ET397160J	11-TR5	ET416933J	6-TR642
EO387782J	10-L1	ER408829J	6-FR201	ET397160J	11-TR6	ET416933J	15-TR5
EO387798J	10-L6	ER411836J	19-R7	ET397160J	13-TR201	ET416933J	15-TR6
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EO392660J	6-L402	ES411687J	17-SW3	ET397160J	18-TR102	ET419712J	13-TR203
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ABBREVIATIONS (VIDEO)

ABBREVIATION	EXPLANATION
A	Audio or Analogue
AC	Alternating Current
ACC	Automatic Color Control
A/C	Audio and Control
ADJ	ADJust (ment)
AFC	Automatic Frequency Control
AFT	Automatic Fine Tuning
AGC	Automatic Gain Control
AH	Audio Head
AL	ALways (voltage)
ALC	Automatic Level Control
A-SW.P	Audio SWitching Pulse
A-MUTE	Audio MUTE
ANT	ANTenna
APC	Automatic Phase Control
ASSY	ASSemblY
BAL	BALance
B DOWN	Break DOWN
BGP	Burst Gate Pulse
BLK	BLocK or BLacK
BOP	Blank Output Pulse
BPF	Band Pass Filter
BU	Back Up (voltage)
B/W	Black and White
C	Chroma or Color
CCD	Charge Coupled Device
CCIR	Comit Consultatif International des Radio communications
CH (ch)	CHannel (channel)
CLK	CLocK
CM	Capstan Motor
CN	CoNnector
COMP	COMParator
CSW	Cassette SWitch
CSYNC	Composite SYNC
CTL	ConTrol
CUE	CUE
DAC	Digital to Analog Converter
DC	Direct Current
DEMOD	DEMODulator
DET	DETetct (DETector)
DL	Delay Line
DM	Drum Motor
DOC	Drop Out Compensator
D.P.E	Drum Phase Error
D.PG	Drum Pulse Generator
EE	Electronic to Electronic
EF	Emitter Follower
EMPHA	EMPHAsis
ENV	ENVelope
EP	Extended Play
EP ROM	Erasable Programmable ROM
EQ	EQualizer
FE	Full track Erase
FF	Flip-Flop or Fast Foward
FG	Frequency Generator
Fig	Figure
FLD	FLuorescent Display
FM	Frequency Modulation
Fo	resonance Frequency
FREQ	FREQuency
GND	GrouND
H	Horizontal
HP	Horizontal (sync) pulse
HPF	High Pass Filter
HQ	High Quality System
IC	Integrated Circuit
ID	IDentification
IDL	IDLe (Voltage)
IMS	Interactive Monitor System
INS	INSert
INV	INVerter
L	Left
LED	Light Emitting Diode
LIM	LIMitter
LM	Loading Motor
LM STP	Loading Motor STop
LP	Long Play
LPF	Low Pass Filter
ME-SECAM	Middle East SECAM
MI-COM	MIcro COMputer
MM	Mono-stayble Multi

ABBREVIATION	EXPLANATION
MOD	MODulator
MRS	Motor ReverSe
NAP	Ntsc Amusement Pal
NG	Noise Gate
NICAM	Near Instanteneous Compand Audio Multiplex
NON-LIN	NON-LINear
N.T.S.C.	National Television System Committee
OSC	OSCillator
PAL	Phase Alternation by Line
PB	Play Back
PCB (P.C.B)	Printed Circuit Board
P-COM	Phase-COMparator
P DOWN	Power DOWN
PG	Pulse Generator
P.I.P	Picture In Picture
PL, PLG	PLunger (PLunGer)
PRG (PGM)	PRoGram (ProGraM)
PU	Pick UP (head, pulse)
PWR	PoWeR
Q	Quality factor
R	Right
RAM	Random Access Memory
REC	RECord
REF	REFerence
REF-V	REFerence Vertical signal
REG	REGulator
REV (REVW)	REView (REVieW)
REW	REWind
RF	Radio Frequency
ROM	Read Only Memory
R.S SW	Record-Safety SWitch
RST (RES)	ReSet (RESet)
RVS	ReVerSe
S	Sensor, Shield
SAW	Surface Acoustic Wave
SC	SimulCast
S CLK	Serial CLocK
SECAM	SÉquentiel Couleur À Mémoire
S & H	Sample and Hold
SLP	Super Long Play
SP	Standard Play
SPD	SPeeD
SRP	Supply Reel Pulse
SRV	SeRVo
SOW	Sync On Word
STBY	STandBY
S.VHS	Super VHS
SW	SWitch
SW'NG	SWitchiNG
SWP	SWitching Pulse
SYNC	SYNChronize
T-AUDIO	Tuner AUDIO
TPZ (TRAPE)	TraPeZoid (TRAPEzoid)
TRK	TRacKing
TRP	Take up Reel Pulse
T/U	Take Up
TV	TeleVision
UHF	Ultra High Frequency
UNR	UNRegulated (voltage)
V	Vertical or Video
VASS	Video Address Search System
VCO	Voltage Controlled Oscillator
VH	Video Head
VHF	Very High Frequency
VHS	Video Home System
VIF	Video Intermediate Frequency
VISS	Video Index Search System
VJ	Video Judge
VM	Voltage for Memory
VOB	Video On Blank
VOW	Video On Word
VP	Vertical (sync) Pulse
VPS	Video Program System
VPT	Video Programming by video Text
VT	Voltage for Tuning
WHT	WHiTe
Y	Luminance
2H	2 Hour (SP)
4H	4 Hour (LP)
6H	6 Hour (SLP/EP)

AKAI ELECTRIC CO., LTD.

12-14, 2-Chome, Higashi-Kojiya, Ohta-ku, Tokyo, Japan
SERVICE DEPARTMENT TEL: Tokyo (3745) 9884 TELEX: J26261
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950 Printed in Japan

AKAI

MODEL **VS-G705**EA-D/EOH-D
MODEL **VS-G711**EDG,**G712**EOG-D
MODEL **VS-G715**EK-N/EO-D/EOH-DN/EOH-N
MODEL **VS-G717**EOG-D

SCHEMATIC DIAGRAMS AND PC BOARDS

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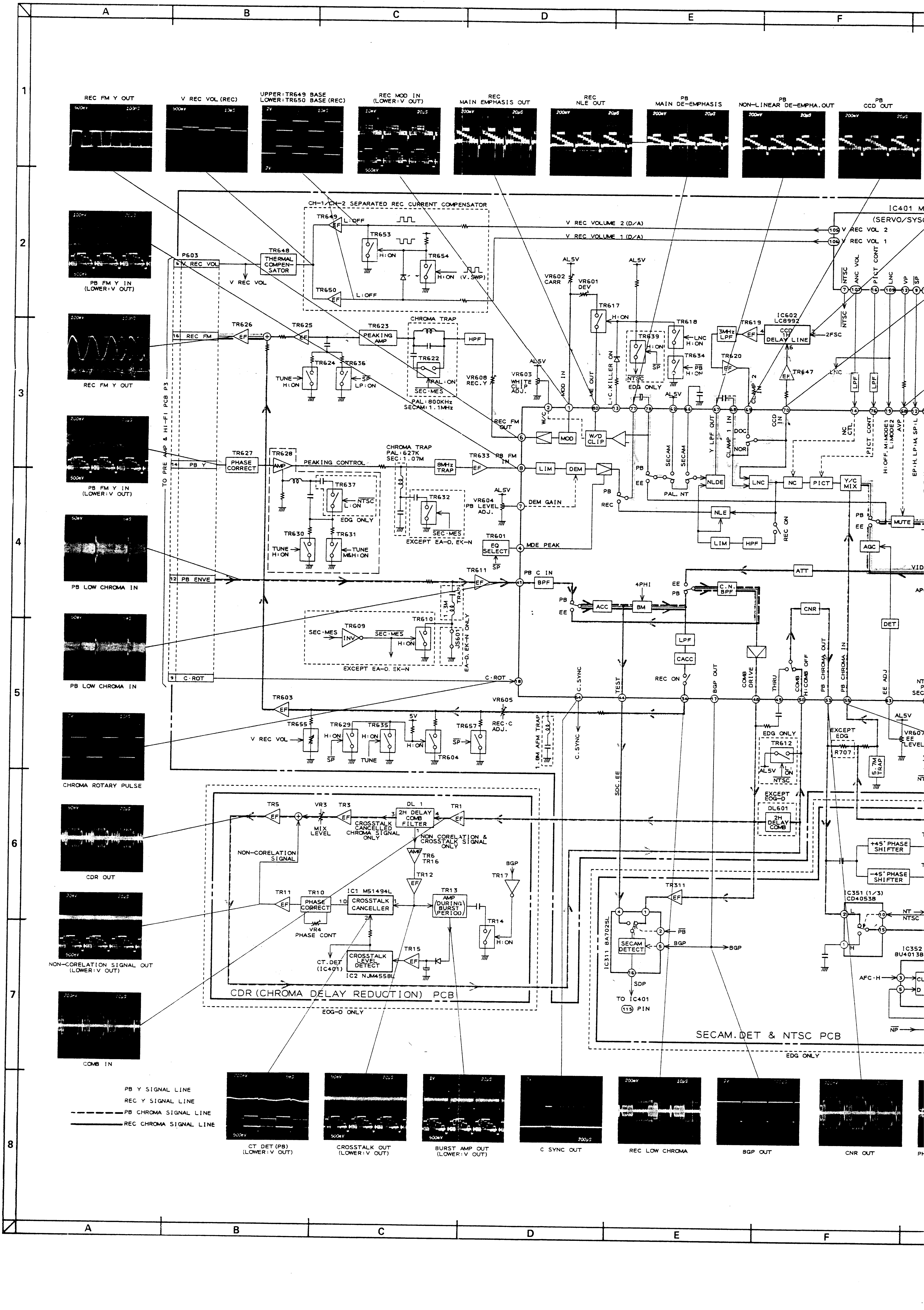
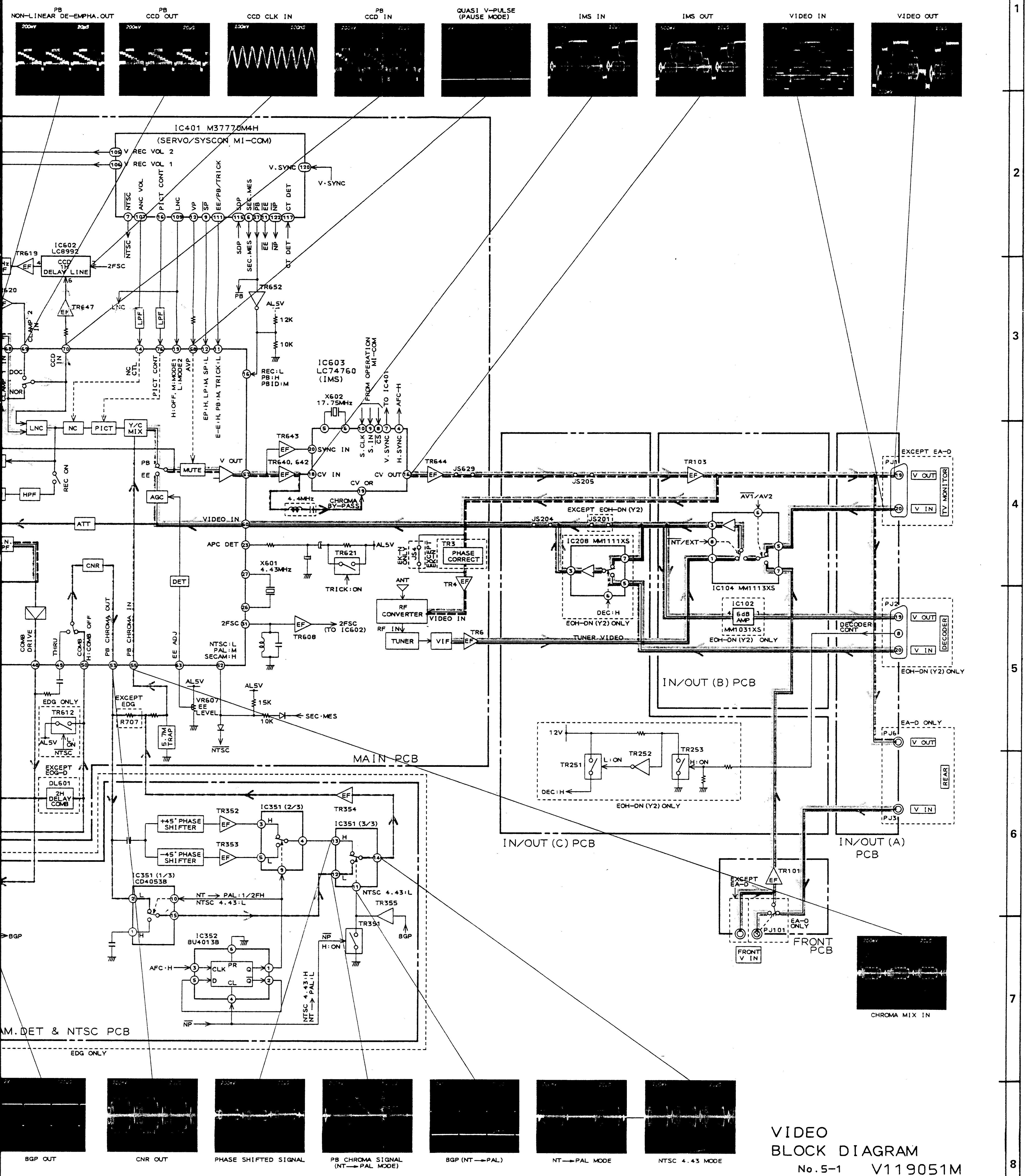


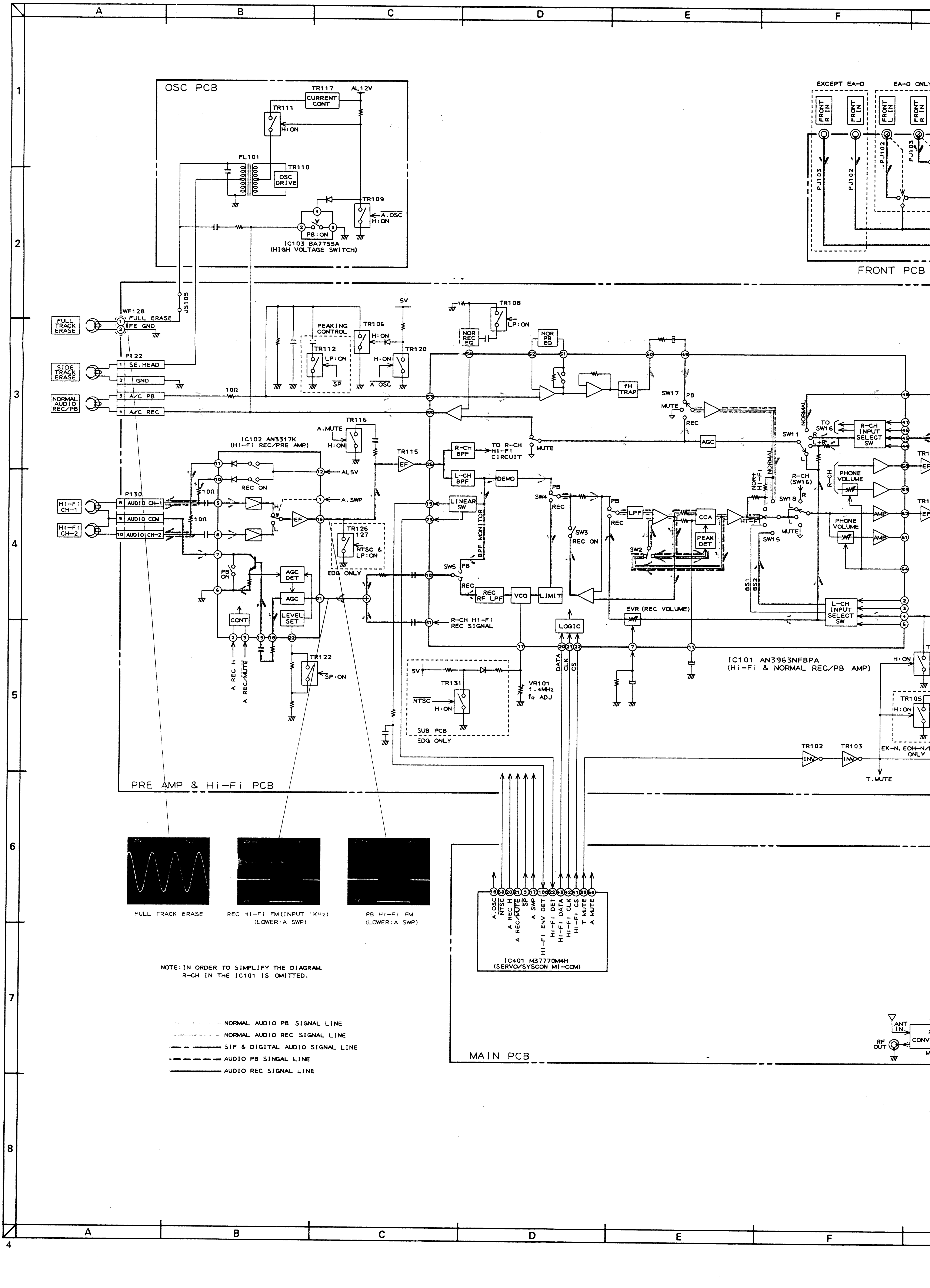
A
B
C
D
E
F
1
2
3
4
5
6
7
8
REC FM Y OUT
V REC VOL (REC)
UPPER: TR649 BASE
LOWER: TR650 BASE (REC)
REC MOD IN
(LOWER: V OUT)
REC
MAIN EMPHASIS OUT
REC
NLE OUT
PB
MAIN DE-EMPHASIS
PB
NON-LINEAR DE-EMPHA. OUT
PB
CCD OUT
PB FM Y IN
(LOWER: V OUT)
REC FM Y OUT
PB FM Y IN
(LOWER: V OUT)
PB LOW CHROMA IN
PB LOW CHROMA IN
CHROMA ROTARY PULSE
CDR OUT
NON-CORELATION SIGNAL OUT
(LOWER: V OUT)
COMB IN
CH-1/CH-2 SEPARATED REC CURRENT COMPENSATOR
TR649
L: OFF
TR653
H: ON
TR654
H: ON
(V. SWP)
TR650
L: OFF
TR648
THERMAL COMPEN-SATOR
P603
6 V. REC VOL
V REC VOL
V REC VOLUME 2 (D/A)
V REC VOLUME 1 (D/A)
IC401 M
(SERVO/SYSC
105 V REC VOL 2
106 V REC VOL 1
TR626
TR625
16 REC FM
TR623
PEAKING AMP
CHROMA TRAP
TR622
PAL: ON
SEC·MES
PAL: 800KHz
SECAM: 1.1MHz
HPF
TR624
TR636
TUNE H: ON
SP LP: ON
TO PRE AMP & HI-FI PCB P3
TR627
PHASE CORRECT
14 PB Y
TR628
AMP
PEAKING CONTROL
CHROMA TRAP
PAL: 627K
SEC: 1.07M
8MHz TRAP
TR633
PB FM IN
TR637
NTSC
L: ON
EDG ONLY
TR632
SEC·MES
EXCEPT EA-D, EK-N
TR630
TR631
TUNE H: ON
TUNE M&H: ON
AL5V
VR602 CARR
VR601 DEV
TR617
H: ON
VR608 REC. Y
VR603 WHITE CLIP ADJ.
MOD IN
ME OUT
L.C. KILLER ON
TR639
H: ON
NTSC
SP
EDG ONLY
TR618
LNC
H: ON
TR634
PB
H: ON
3MHz LPF
TR619
IC602 LC8992
CCD 1H DELAY LINE
2FSC
TR620
TR647
CLAMP 2 IN
Y LPF OUT
CLAMP 1 IN
CCD IN
NTSC
ANC VOL
PICT CONT
LNC
VP
SP
NC CTL
PICT CONT
H: OFF, M: MODE1 L: MODE2
AVP
EP: H, LP: M, SP: L
REC FM OUT
W/C
MOD
W/D CLIP
DOC
NOR
LIM
DEM
PB
EE
SECAM
SECAM
PAL, NT
NLDE
LNC
NC
PICT
Y/C MIX
DEM GAIN
REC
NLE
REC ON
LIM
HPF
MUTE
AGC
VR604 PB LEVEL ADJ.
TR601
EQ SELECT
SP
MDE PEAK
12 PB ENVE
TR611
PB C IN
BPF
4PHI
C.N. BPF
ACC
BM
ATT
VID
AP
1.3M TRAP
JS601
EA-D, EK-N ONLY
TR609
SEC·MES
INV
TR610
H: ON
EXCEPT EA-D, EK-N
CNR
DET
LPF
CACC
REC ON
9 C·ROT
C·ROT
C. SYNC
TEST
BGP OUT
COMB DRIVE
THRU
COMB H: COMB OFF
PB CHROMA OUT
PB CHROMA IN
EE ADJ
NT
SEC
TR603
VR605
REC·C ADJ.
TR655
TR629
TR635
5V
TR657
TR604
V REC VOL
H: ON
SP
TUNE
1.8M AFM TRAP
C. SYNC
SDC. EE
EDG ONLY
TR612
AL5V
NTSC
EXCEPT EDG
R707
5.7M TRAP
VR607 EE LEVEL
EXCEPT EDG-D
DL601
2H DELAY COMB
TR5
VR3
TR3
DL 1
2H DELAY COMB FILTER
TR1
MIX LEVEL
CROSSTALK CANCELLED CHROMA SIGNAL ONLY
NON CORELATION & CROSSTALK SIGNAL ONLY
NON-CORELATION SIGNAL
TR6
TR16
TR12
TR13
AMP (DURING BURST PERIOD)
BGP
TR17
TR11
TR10
PHASE CORRECT
IC1 M51494L
CROSSTALK CANCELLER
VR4
PHASE CONT
TR14
H: ON
CT. DET (IC401)
CROSSTALK LEVEL DETECT
IC2 NJM4558L
TR15
CDR (CHROMA DELAY REDUCTION) PCB
EDG-D ONLY
TR311
IC311 BA7025L
SECAM DETECT
PB
BGP
SDP
TO IC401
115 PIN
+45° PHASE SHIFTER
-45° PHASE SHIFTER
IC351 (1/3) CD4053B
NT
NTSC
IC352 BU4013B
AFC·H
NP
SECAM. DET & NTSC PCB
EDG ONLY
PB Y SIGNAL LINE
REC Y SIGNAL LINE
PB CHROMA SIGNAL LINE
REC CHROMA SIGNAL LINE
CT DET (PB)
(LOWER: V OUT)
CROSSTALK OUT
(LOWER: V OUT)
BURST AMP OUT
(LOWER: V OUT)
C SYNC OUT
REC LOW CHROMA
BGP OUT
CNR OUT


PB NON-LINEAR DE-EMPHA.OUT
PB CCD OUT
CCD CLK IN
PB CCD IN
QUASI V-PULSE (PAUSE MODE)
IMS IN
IMS OUT
VIDEO IN
VIDEO OUT
IC401 M37770M4H
(SERVO/SYSCON MI-COM)
V REC VOL 2
V REC VOL 1
V.SYNC
NTSC
ANC VOL
PICT CONT
LNC
VP
SP
EE/PB/TRICK
SDP
SEC.MES
PB
EE
NP
CT DET
IC602 LC8992
CCD 1H DELAY LINE
2FSC
TR619
TR647
TR652
AL5V
12K
10K
REC:L
PB:H
PBID:M
LPF
CLAMP 2 IN
CCD IN
DOC
NOR
NC CTL
PICT CONT
H:OFF, M:MODE1 L:MODE2
AVP
EP:H, LP:M SP:L
E-E:H, PB:M, TRICK:L
LNC
NC
PICT
Y/C MIX
REC ON
HPF
MUTE
V OUT
AGC
ATT
VIDEO IN
APC DET
TR621
TRICK:ON
X601 4.43MHz
2FSC
2FSC (TO IC602)
TR608
NTSC:L PAL:M SECAM:H
CNR
DET
COMB DRIVE
THRU
COMB H:COMB OFF
PB CHROMA OUT
PB CHROMA IN
EE ADJ
EDG ONLY
TR612
AL5V
NTSC
EXCEPT EDG
R707
VR607 EE LEVEL
15K
10K
SEC·MES
5.7M TRAP
EXCEPT EOG-D
DL601 2H DELAY COMB
MAIN PCB
IC603 LC74760 (IMS)
X602 17.75MHz
FROM OPERATION MI-COM
TO IC401
AFC-H
S.CLK
S.IN
CS
V.SYNC
H.SYNC
TR643
SYNC IN
TR640, 642
CV IN
CV OR
CV OUT
4.4MHz
CHROMA BY-PASS
TR644
JS629
JS205
TR103
JS204
JS201
EXCEPT EOH-DN (Y2)
AV1/AV2
INT/EXT
IC208 MM1111XS
IC104 MM1113XS
DEC:H
EOH-DN (Y2) ONLY
EK-N ONLY
EXCEPT EK-N
JS4
TR3
PHASE CORRECT
ANT
TR4
RF CONVERTER
VIDEO IN
RF IN
TUNER
VIF
TR6
TUNER VIDEO
IC102 6dB AMP MM1031XS
EOH-DN (Y2) ONLY
IN/OUT (B) PCB
EXCEPT EA-D
PJ1
V OUT
V IN
TV MONITOR
PJ2
DECODER CONT
DECODER
EOH-DN (Y2) ONLY
EA-D ONLY
PJ6
PJ3
REAR
IN/OUT (A) PCB
12V
TR251
TR252
TR253
L:ON
H:ON
DEC:H
EOH-DN (Y2) ONLY
IN/OUT (C) PCB
TR101
EXCEPT EA-D
EA-D ONLY
PJ101
FRONT V IN
FRONT PCB
CHROMA MIX IN
TR354
+45° PHASE SHIFTER
-45° PHASE SHIFTER
TR352
TR353
IC351 (2/3)
IC351 (3/3)
IC351 (1/3) CD4053B
NT → PAL:1/2FH
NTSC 4.43:L
NTSC 4.43:L
TR355
TR351
BGP
NP
H:ON
IC352 BU4013B
AFC·H
CLK PR D CL Q
NTSC 4.43:H NT → PAL:L
NP
BGP
AM.DET & NTSC PCB
EDG ONLY
BGP OUT
CNR OUT
PHASE SHIFTED SIGNAL
PB CHROMA SIGNAL (NT → PAL MODE)
BGP (NT → PAL)
NT → PAL MODE
NTSC 4.43 MODE

VIDEO
BLOCK DIAGRAM

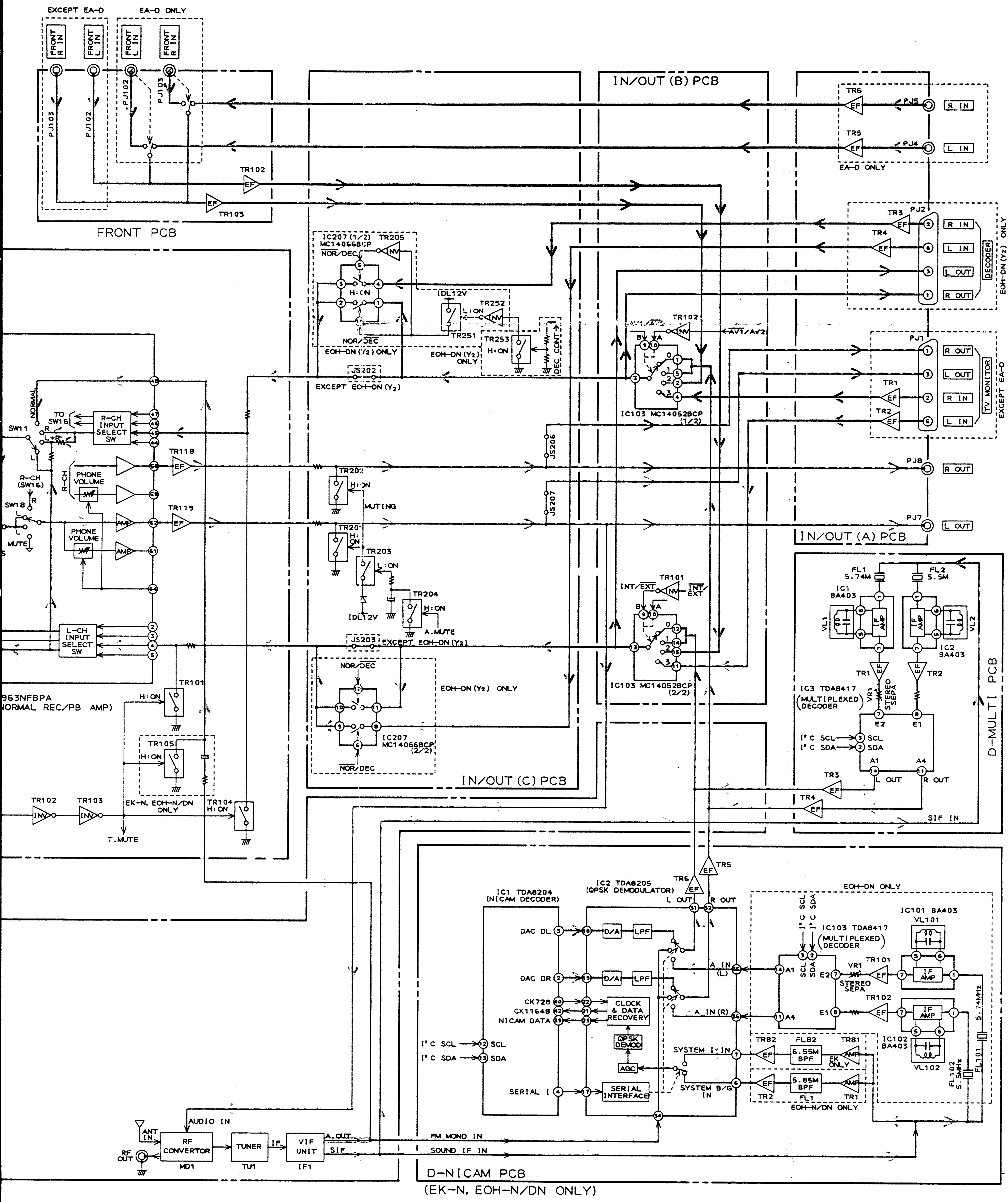
No.5-1 V119051M

A1

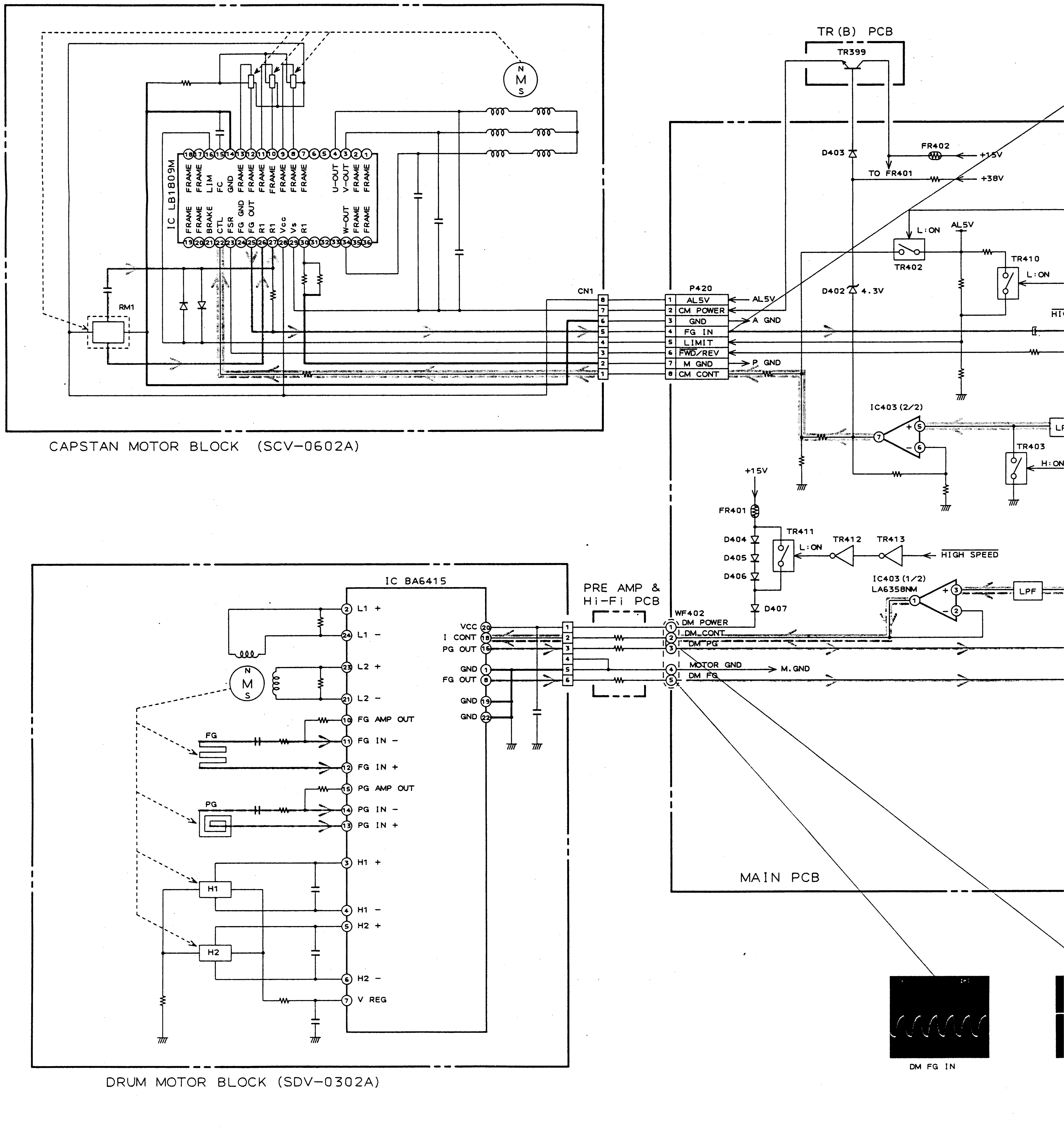

A
B
C
D
E
F
1
2
3
4
5
6
7
8
OSC PCB
TR117
CURRENT CONT
AL12V
TR111
H:ON
FL101
TR110
OSC DRIVE
TR109
A.OSC
H:ON
PB:ON
IC103 BA7755A
(HIGH VOLTAGE SWITCH)
EXCEPT EA-D
EA-D ONLY
FRONT R IN
FRONT L IN
PJ103
PJ102
FRONT PCB
FULL TRACK ERASE
WF128
FULL ERASE
FE GND
JS105
SIDE TRACK ERASE
P122
SE. HEAD
GND
NORMAL AUDIO REC/PB
A/C PB
A/C REC
10Ω
SV
PEAKING CONTROL
TR112
LP:ON
SP
TR106
H:ON
TR120
H:ON
A OSC
TR108
LP:ON
NOR REC EQ
NOR PB EQ
fH TRAP
SW17
PB
MUTE
REC
AGC
SW11
NORMAL
TO SW16
R-CH INPUT SELECT SW
TR116
A.MUTE
H:ON
IC102 AN3317K
(HI-FI REC/PRE AMP)
AL5V
REC ON
A. SWP
HI-FI CH-1
HI-FI CH-2
P130
AUDIO CH-1
AUDIO COM
AUDIO CH-2
EF
TR115
R-CH BPF
TO R-CH HI-FI CIRCUIT
MUTE
L-CH BPF
DEMO
LINEAR SW
SW4
SW3
REC ON
LPF
CCA
PEAK DET
SW2
HI-FI
NOR+ HI-FI
R-CH (SW16)
SW18
SW15
PHONE VOLUME
AMP
TR126 127
NTSC & LP:ON
EDG ONLY
AGC DET
AGC
LEVEL SET
CONT
PB ON
SW5
BPF MONITOR
REC RF LPF
VCO
LIMIT
LOGIC
EVR (REC VOLUME)
BS1
BS2
L-CH INPUT SELECT SW
R-CH HI-FI REC SIGNAL
A REC H
A REC/MUTE
TR122
SP:ON
SUB PCB
EDG ONLY
TR131
NTSC
H:ON
VR101 1.4MHz fo ADJ
DATA
CLK
CS
IC101 AN3963NFBPA
(Hi-Fi & NORMAL REC/PB AMP)
TR105
H:ON
EK-N, EOH-N/ ONLY
TR102
TR103
INV
T.MUTE
PRE AMP & Hi-Fi PCB
A.OSC
NTSC
A REC H
A REC/MUTE
SP
A SWP
HI-FI ENV DET
HI-FI DET
HI-FI DATA
HI-FI CLK
HI-FI CS
T MUTE
A MUTE
IC401 M37770M4H
(SERVO/SYSCON MI-COM)
FULL TRACK ERASE
REC HI-FI FM(INPUT 1KHz)
(LOWER:A SWP)
PB HI-FI FM
(LOWER:A SWP)
ANT IN
RF OUT
CONV
MAIN PCB

NOTE: IN ORDER TO SIMPLIFY THE DIAGRAM, R-CH IN THE IC101 IS OMITTED.

NORMAL AUDIO PB SIGNAL LINE
NORMAL AUDIO REC SIGNAL LINE
SIF & DIGITAL AUDIO SIGNAL LINE
AUDIO PB SINGAL LINE
AUDIO REC SIGNAL LINE


EXCEPT EA-D
EA-D ONLY
FRONT R IN
FRONT L IN
FRONT L IN
FRONT R IN
PJ103
PJ102
PJ102
PJ103
TR102
EF
TR103
FRONT PCB
IN/OUT (B) PCB
TR6
EF
PJ5
S IN
TR5
PJ4
L IN
EA-D ONLY
TR3
PJ2
R IN
TR4
L IN
L OUT
R OUT
DECODER
EOH-DN (Y2) ONLY
IC207 (1/2)
MC14066BCP
TR205
INV
NOR/DEC
H:ON
NOR/DEC
EOH-DN (Y2) ONLY
IDL12V
TR252
L:ON
TR251
TR253
H:ON
EOH-DN (Y2) ONLY
DEC CONT
JS202
EXCEPT EOH-DN (Y2)
TR102
AV1/AV2
IC103 MC14052BCP (1/2)
PJ1
R OUT
L OUT
TR1
R IN
TR2
L IN
TV MONITOR
EXCEPT EA-D
NORMAL
TO SW16
SW11
R-CH INPUT SELECT SW
R-CH (SW16)
SW18
MUTE
R-CH
PHONE VOLUME
PHONE VOLUME
AMP
TR118
EF
TR119
EF
JS206
JS207
TR202
H:ON
MUTING
TR201
H: ON
TR203
L:ON
IDL12V
TR204
H:ON
A.MUTE
PJ8
R OUT
PJ7
L OUT
IN/OUT (A) PCB
INT/EXT
TR101
INV
IC103 MC14052BCP (2/2)
L-CH INPUT SELECT SW
JS203
EXCEPT EOH-DN (Y2)
NOR/DEC
EOH-DN (Y2) ONLY
IC207
MC14066BCP (2/2)
NOR/DEC
IN/OUT (C) PCB
963NFBPA
NORMAL REC/PB AMP)
TR101
H:ON
TR105
H:ON
TR102
INV
TR103
INV
EK-N, EOH-N/DN ONLY
TR104
H:ON
T.MUTE
FL1
5.74M
FL2
5.5M
IC1
BA403
VL1
IF AMP
IF AMP
VL2
IC2
BA403
TR1
TR2
IC3 TDA8417
(MULTIPLEXED DECODER)
VR1
STEREO SEPA
E2
E1
I²C SCL
I²C SDA
SCL
SDA
A1
A4
L OUT
R OUT
TR3
TR4
SIF IN
D-MULTI PCB
(EA-D, EO-D, EOH-D, EOG-D ONLY)
TR5
TR6
EF
IC1 TDA8204
(NICAM DECODER)
IC2 TDA8205
(QPSK DEMODULATOR)
L OUT
R OUT
DAC DL
DAC DR
D/A
LPF
CK728
CK11648
NICAM DATA
CLOCK & DATA RECOVERY
QPSK DEMOD
AGC
SERIAL INTERFACE
SERIAL I
I²C SCL
I²C SDA
SCL
SDA
A IN (L)
A IN (R)
SYSTEM I IN
SYSTEM B/G IN
EOH-DN ONLY
I²C SCL
I²C SDA
IC103 TDA8417
(MULTIPLEXED DECODER)
IC101 BA403
VL101
TR101
VR1
STEREO SEPA
IF AMP
TR102
IF AMP
IC102
BA403
VL102
5.74MHz
FL101
FL102
5.5MHz
TR82
FL82
6.55M BPF
TR81
EK ONLY
AMP
TR2
FL1
5.85M BPF
TR1
EOH-N/DN ONLY
ANT IN
AUDIO IN
RF OUT
RF CONVERTOR
MD1
TUNER
TU1
IF
VIF UNIT
IF1
A.OUT
SIF
FM MONO IN
SOUND IF IN
D-NICAM PCB
(EK-N, EOH-N/DN ONLY)

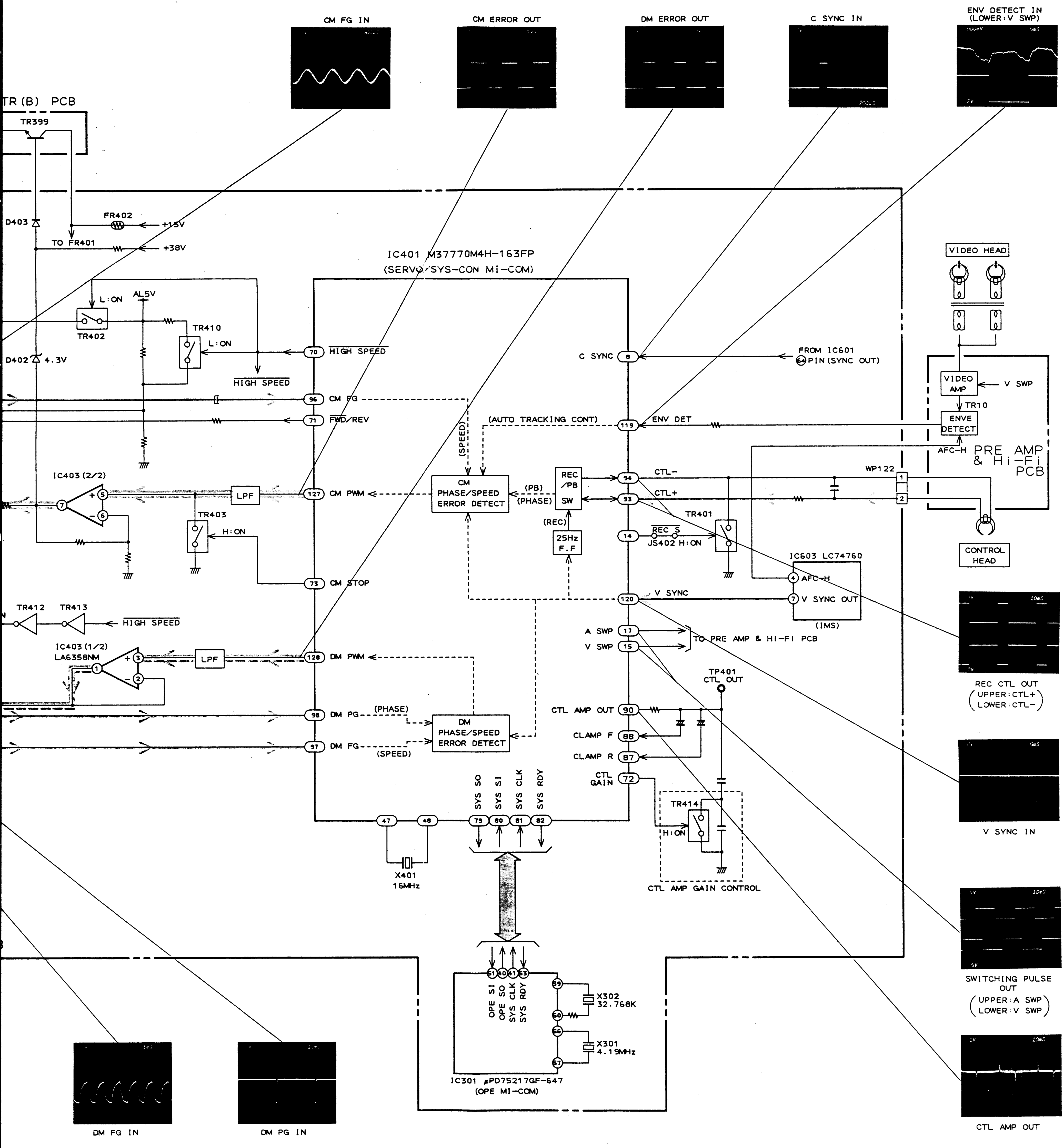
AUDIO
BLOCK DIAGRAM
No.5-2 V119052M
A1


TR(B) PCB
TR399
D403
FR402
+15V
TO FR401
+38V
L:ON
AL5V
TR402
TR410
L:ON
D402
4.3V
IC LB1809M
FRAME
FRAME
LIM
FC
GND
FRAME
FRAME
FRAME
FRAME
FRAME
FRAME
U-OUT
V-OUT
FRAME
FRAME
FRAME
FRAME
BRAKE
CTL
FSR
FG GND
FG OUT
R1
R1
Vcc
Vs
R1
W-OUT
FRAME
FRAME
RM1
CN1
P420
1 AL5V
2 CM POWER
3 GND
4 FG IN
5 LIMIT
6 FWD/REV
7 M GND
8 CM CONT
AL5V
A GND
P GND
IC403(2/2)
TR403
H:ON
CAPSTAN MOTOR BLOCK (SCV-0602A)
+15V
FR401
D404
D405
D406
D407
TR411
L:ON
TR412
TR413
HIGH SPEED
IC403(1/2)
LA6358NM
LPF
IC BA6415
PRE AMP &
Hi-Fi PCB
WF402
1 DM POWER
2 DM CONT
3 DM PG
4 MOTOR GND
5 DM FG
M.GND
VCC
I CONT
PG OUT
GND
FG OUT
GND
GND
L1 +
L1 −
L2 +
L2 −
FG AMP OUT
FG IN −
FG IN +
PG AMP OUT
PG IN −
PG IN +
H1 +
H1 −
H2 +
H2 −
V REG
FG
PG
H1
H2
MAIN PCB
DM FG IN
DRUM MOTOR BLOCK (SDV-0302A)

NOTE:

1. PHOTOGRAPHS EXCEPT [REC CTL OUT] WERE TAKEN DURING PB MODE.
2. EXCEPT [REC CTL OUT] AND [SWITCHING PULSE OUT], PHOTOGRAPH'S SECOND LINE FROM THE BOTTOM IS DC 0V.

:CAF
:CAF
:DRU
:DRU


CM FG IN
CM ERROR OUT
DM ERROR OUT
C SYNC IN
ENV DETECT IN
(LOWER:V SWP)
TR(B) PCB
TR399
D403
FR402
+15V
TO FR401
+38V
IC401 M37770M4H-163FP
(SERVO/SYS-CON MI-COM)
L:ON
AL5V
TR402
TR410
L:ON
D402
4.3V
70 HIGH SPEED
HIGH SPEED
96 CM FG
71 FWD/REV
C SYNC 8
FROM IC601
64 PIN (SYNC OUT)
(AUTO TRACKING CONT)
119 ENV DET
(SPEED)
IC403 (2/2)
LPF
127 CM PWM
CM
PHASE/SPEED
ERROR DETECT
(PB)
(PHASE)
REC
/PB
SW
94 CTL-
93 CTL+
WP122
TR403
H:ON
(REC)
25Hz
F.F
14 REC S
JS402 H:ON
TR401
73 CM STOP
IC603 LC74760
4 AFC-H
7 V SYNC OUT
120 V SYNC
(IMS)
TR412
TR413
HIGH SPEED
IC403 (1/2)
LA6358NM
128 DM PWM
A SWP 17
V SWP 15
TO PRE AMP & HI-FI PCB
TP401
CTL OUT
98 DM PG
(PHASE)
DM
PHASE/SPEED
ERROR DETECT
97 DM FG
(SPEED)
CTL AMP OUT 90
CLAMP F 88
CLAMP R 87
CTL GAIN 72
TR414
H:ON
CTL AMP GAIN CONTROL
SYS SO
SYS SI
SYS CLK
SYS RDY
47
48
79
80
81
82
X401
16MHz
51
40
41
53
OPE SI
OPE SO
SYS CLK
SYS RDY
59
60
56
57
X302
32.768K
X301
4.19MHz
IC301 μPD75217GF-647
(OPE MI-COM)
VIDEO HEAD
VIDEO AMP
V SWP
TR10
ENVE DETECT
AFC-H
PRE AMP
& Hi-Fi
PCB
CONTROL HEAD
REC CTL OUT
(UPPER:CTL+
LOWER:CTL-)
V SYNC IN
SWITCHING PULSE OUT
(UPPER:A SWP
LOWER:V SWP)
CTL AMP OUT
DM FG IN
DM PG IN

▬▬▬▬▬ :CAPSTAN MOTOR SPEED CONTROL LINE

▬ ▬ ▬ ▬ :CAPSTAN MOTOR PHASE CONTROL LINE

——— :DRUM MOTOR SPEED CONTROL LINE

– – – – :DRUM MOTOR PHASE CONTROL LINE

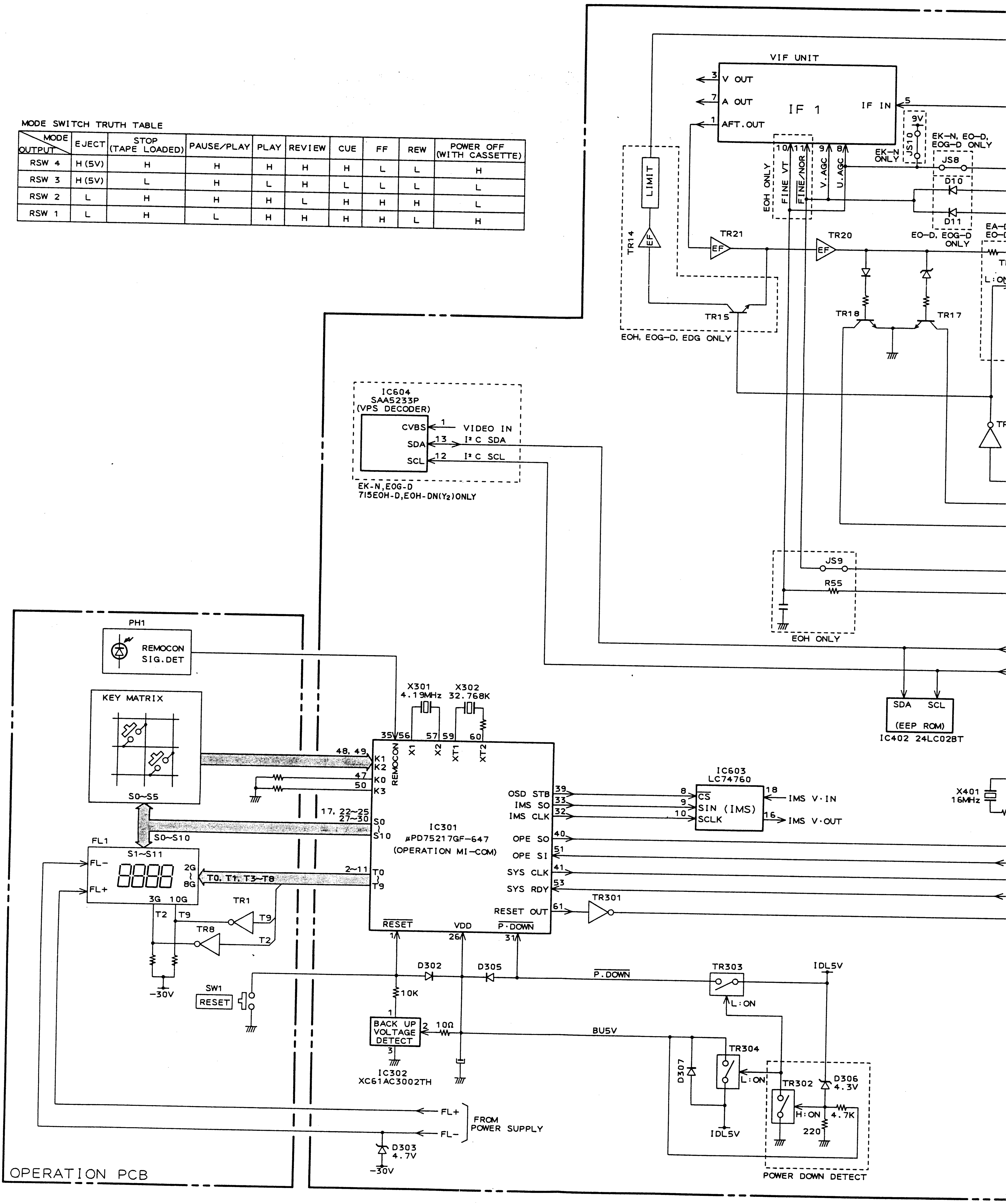
UT]

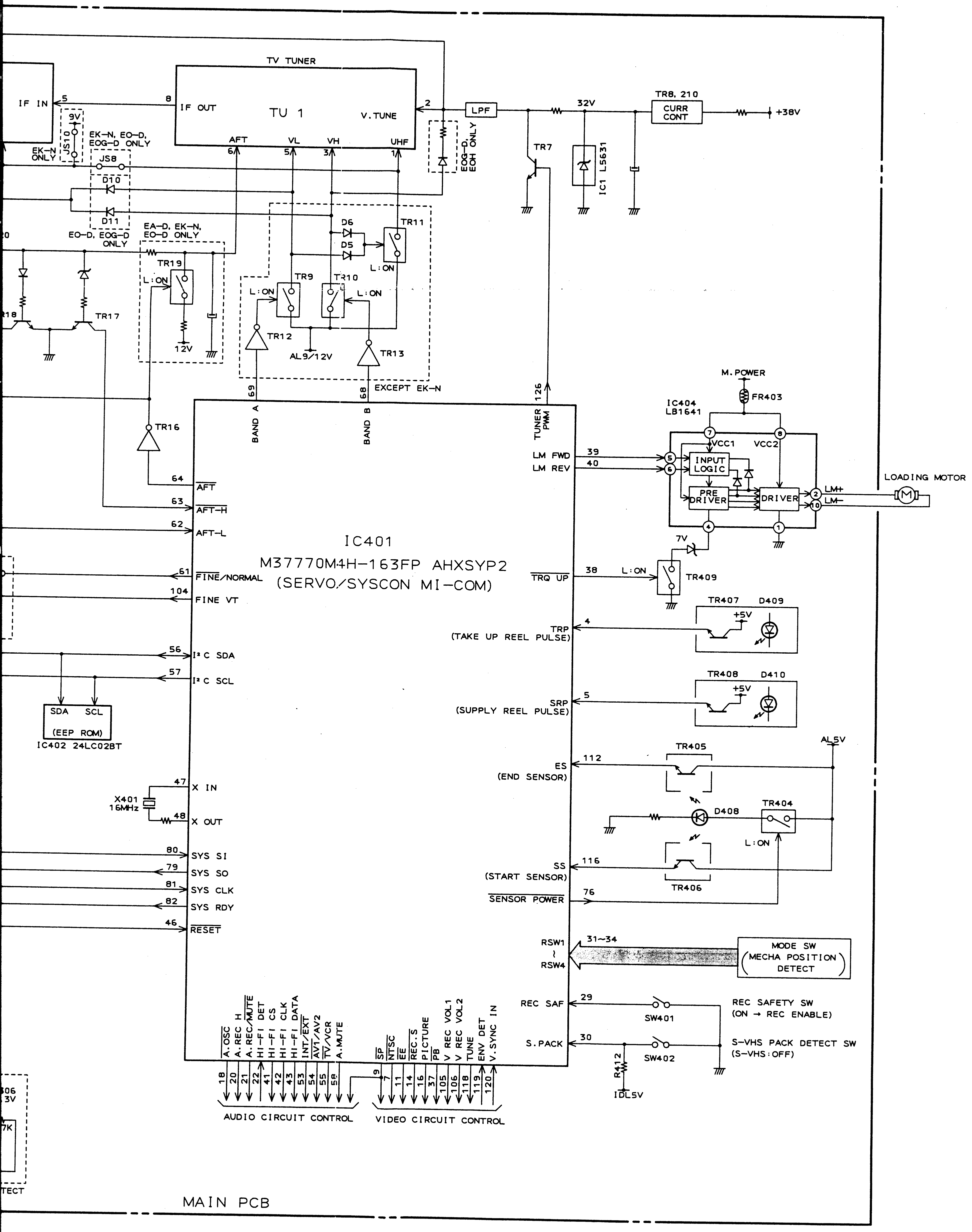
APH' S
S DC 0V.

SERVO
BLOCK DIAGRAM
No.5-3 V119053M
A1

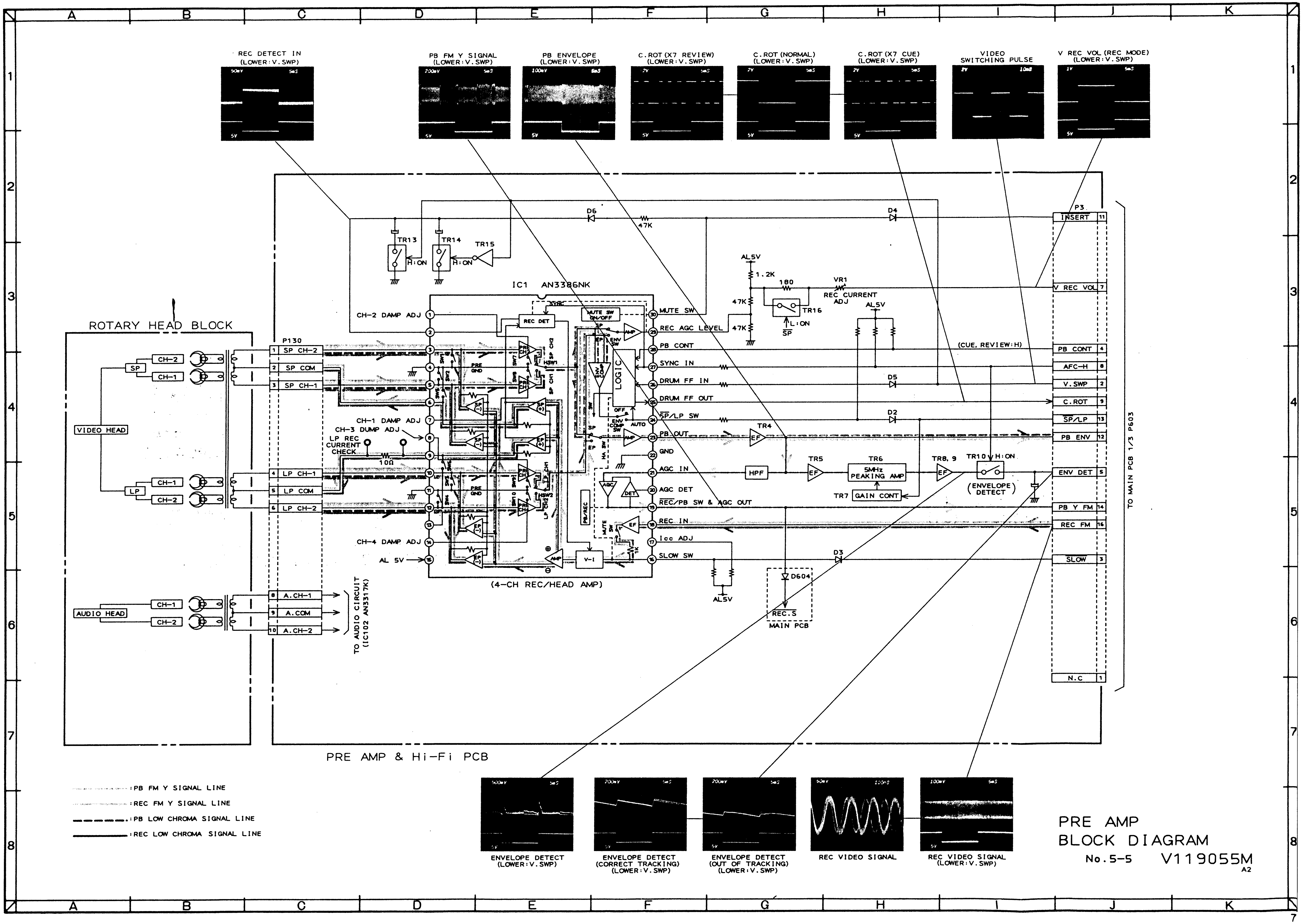
MODE SWITCH TRUTH TABLE

OUTPUT \ MODE	EJECT	STOP (TAPE LOADED)	PAUSE/PLAY	PLAY	REVIEW	CUE	FF	REW	POWER OFF (WITH CASSETTE)
RSW 4	H (5V)	H	H	H	H	H	L	L	H
RSW 3	H (5V)	L	H	L	H	L	L	L	L
RSW 2	L	H	H	H	L	H	H	H	L
RSW 1	L	H	L	H	H	H	H	L	H


A
B
C
D
E
F
1
2
3
4
5
6
7
8
VIF UNIT
IF 1
3 V OUT
7 A OUT
1 AFT.OUT
IF IN 5
10 11 9 8
FINE VT
FINE/NOR
V.AGC
U.AGC
EOH ONLY
9V
JS10
EK–N ONLY
EK–N, EO–D, EOG–D ONLY
JS8
D10
D11
EO–D, EOG–D ONLY
LIMIT
TR14
EF
TR21
EF
TR20
EF
TR15
EOH, EOG–D, EDG ONLY
TR18
TR17
IC604
SAA5233P
(VPS DECODER)
CVBS 1 VIDEO IN
SDA 13 I² C SDA
SCL 12 I² C SCL
EK-N,EOG-D
715EOH-D,EOH-DN(Y2)ONLY
JS9
R55
EOH ONLY
SDA SCL
(EEP ROM)
IC402 24LC02BT
PH1
REMOCON SIG.DET
KEY MATRIX
S0~S5
S0~S10
FL1
S1~S11
FL–
FL+
2G ~ 8G
3G 10G
T0, T1, T3~T8
T2
T9
TR1
T9
TR8
T2
–30V
SW1
RESET
X301
4.19MHz
X302
32.768K
35 56 57 59 60
REMOCON
X1
X2
XT1
XT2
48, 49
K1
K2
47 K0
50 K3
17, 22~25 27~30
S0 ~ S10
2~11
T0 ~ T9
IC301
µPD75217GF–647
(OPERATION MI–COM)
OSD STB 39
IMS SO 33
IMS CLK 32
OPE SO 40
OPE SI 51
SYS CLK 41
SYS RDY 53
RESET OUT 61
TR301
RESET 1
VDD 26
P·DOWN 31
IC603
LC74760
8 CS
9 SIN (IMS)
10 SCLK
18 IMS V·IN
16 IMS V·OUT
X401
16MHz
D302
D305
10K
P.DOWN
TR303
L:ON
IDL5V
1
BACK UP VOLTAGE DETECT
2 10Ω
3
IC302
XC61AC3002TH
BU5V
TR304
D307
L:ON
TR302
H:ON
D306
4.3V
4.7K
220
IDL5V
POWER DOWN DETECT
FL+
FL–
FROM POWER SUPPLY
D303
4.7V
–30V
OPERATION PCB


TV TUNER
TU 1
IF IN
IF OUT
V.TUNE
AFT
VL
VH
UHF
9V
JS10
EK-N ONLY
EK-N, EO-D, EOG-D ONLY
JS8
D10
D11
EO-D, EOG-D ONLY
EA-D, EK-N, EO-D ONLY
EOG-D, EOH ONLY
LPF
32V
TR8, 210
CURR CONT
+38V
TR7
IC1 L5631
D6
D5
TR11
L:ON
TR9
TR10
TR12
TR13
AL9/12V
EXCEPT EK-N
TR19
12V
TR18
TR17
TR16
BAND A
BAND B
TUNER PWM
AFT
AFT-H
AFT-L
FINE/NORMAL
FINE VT
I²C SDA
I²C SCL
SDA
SCL
(EEP ROM)
IC402 24LC02BT
X401 16MHz
X IN
X OUT
SYS SI
SYS SO
SYS CLK
SYS RDY
RESET
IC401
M37770M4H-163FP AHXSYP2
(SERVO/SYSCON MI-COM)
M.POWER
FR403
IC404 LB1641
VCC1
VCC2
INPUT LOGIC
PRE DRIVER
DRIVER
LM+
LM-
LOADING MOTOR
LM FWD
LM REV
7V
TRQ UP
TR409
TR407
D409
+5V
TRP (TAKE UP REEL PULSE)
TR408
D410
SRP (SUPPLY REEL PULSE)
TR405
AL5V
ES (END SENSOR)
D408
TR404
SS (START SENSOR)
TR406
SENSOR POWER
RSW1 ~ RSW4
31~34
MODE SW (MECHA POSITION DETECT)
REC SAF
SW401
REC SAFETY SW (ON → REC ENABLE)
S.PACK
SW402
S-VHS PACK DETECT SW (S-VHS:OFF)
R412
IDL5V
A.OSC
A.REC H
A.REC/MUTE
HI-FI DET
HI-FI CS
HI-FI CLK
HI-FI DATA
INT/EXT
AV1/AV2
TV/VCR
A.MUTE
SP
NTSC
EE
REC.S
PICTURE
PB
V REC VOL1
V REC VOL2
TUNE
ENV DET
V.SYNC IN
AUDIO CIRCUIT CONTROL
VIDEO CIRCUIT CONTROL
MAIN PCB
TECT
306
3V
7K
5
8
6
5
3
1
2
64
63
62
61
104
56
57
47
48
80
79
81
82
46
69
68
126
39
40
38
4
5
112
116
76
29
30
18
20
21
22
41
42
43
53
54
55
58
9
7
11
14
16
37
105
106
118
119
120
20

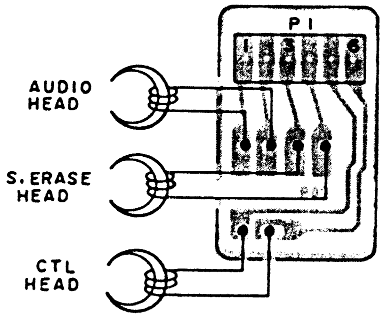
OPERATION & SYSCON
BLOCK DIAGRAM
No.5-4 V119054M A1


A
B
C
D
E
F
G
H
I
J
K
1
2
3
4
5
6
7
8
REC DETECT IN (LOWER: V.SWP)
PB FM Y SIGNAL (LOWER: V.SWP)
PB ENVELOPE (LOWER: V.SWP)
C.ROT (X7 REVIEW) (LOWER: V.SWP)
C.ROT (NORMAL) (LOWER: V.SWP)
C.ROT (X7 CUE) (LOWER: V.SWP)
VIDEO SWITCHING PULSE
V REC VOL (REC MODE) (LOWER: V.SWP)
ROTARY HEAD BLOCK
SP
CH-2
CH-1
LP
CH-1
CH-2
VIDEO HEAD
AUDIO HEAD
CH-1
CH-2
P130
1 SP CH-2
2 SP COM
3 SP CH-1
4 LP CH-1
5 LP COM
6 LP CH-2
8 A.CH-1
9 A.COM
10 A.CH-2
TO AUDIO CIRCUIT (IC102 AN3317K)
TR13
TR14
TR15
H:ON
H:ON
D6
47K
D4
IC1 AN3386NK
CH-2 DAMP ADJ
CH-1 DAMP ADJ
CH-3 DUMP ADJ
LP REC CURRENT CHECK
10Ω
CH-4 DAMP ADJ
AL 5V
REC DET
MUTE SW ON/OFF
LOGIC
AMP
EF
AGC
DET
PB/REC
V-I
(4-CH REC/HEAD AMP)
MUTE SW
REC AGC LEVEL
PB CONT
SYNC IN
DRUM FF IN
DRUM FF OUT
SP/LP SW
PB OUT
GND
AGC IN
AGC DET
REC/PB SW & AGC OUT
REC IN
Icc ADJ
SLOW SW
AL5V
1.2K
47K
47K
180
VR1
REC CURRENT ADJ
TR16
L:ON
SP
AL5V
(CUE, REVIEW:H)
D5
D2
TR4
EF
HPF
TR5
EF
TR6
5MHz PEAKING AMP
TR7
GAIN CONT
TR8, 9
EF
TR10
H:ON
(ENVELOPE DETECT)
D3
AL5V
D604
REC.S
MAIN PCB
P3
INSERT 11
V REC VOL 7
PB CONT 4
AFC-H 8
V.SWP 2
C.ROT 9
SP/LP 13
PB ENV 12
ENV DET 5
PB Y FM 14
REC FM 16
SLOW 3
N.C 1
TO MAIN PCB 1/3 P603
PRE AMP & Hi-Fi PCB
:PB FM Y SIGNAL LINE
:REC FM Y SIGNAL LINE
:PB LOW CHROMA SIGNAL LINE
:REC LOW CHROMA SIGNAL LINE
ENVELOPE DETECT (LOWER: V.SWP)
ENVELOPE DETECT (CORRECT TRACKING) (LOWER: V.SWP)
ENVELOPE DETECT (OUT OF TRACKING) (LOWER: V.SWP)
REC VIDEO SIGNAL
REC VIDEO SIGNAL (LOWER: V.SWP)

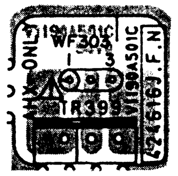
PRE AMP BLOCK DIAGRAM

No.5-5 V119055M

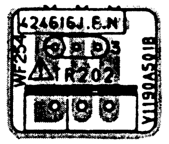
A2


P1
1
3
6
AUDIO HEAD
S.ERASE HEAD
CTL HEAD

A / C HEAD PCB
V1102B5120(J1)


V1190A501C
WF303
1
3
TR399
V1190A501C
424616J.F.N

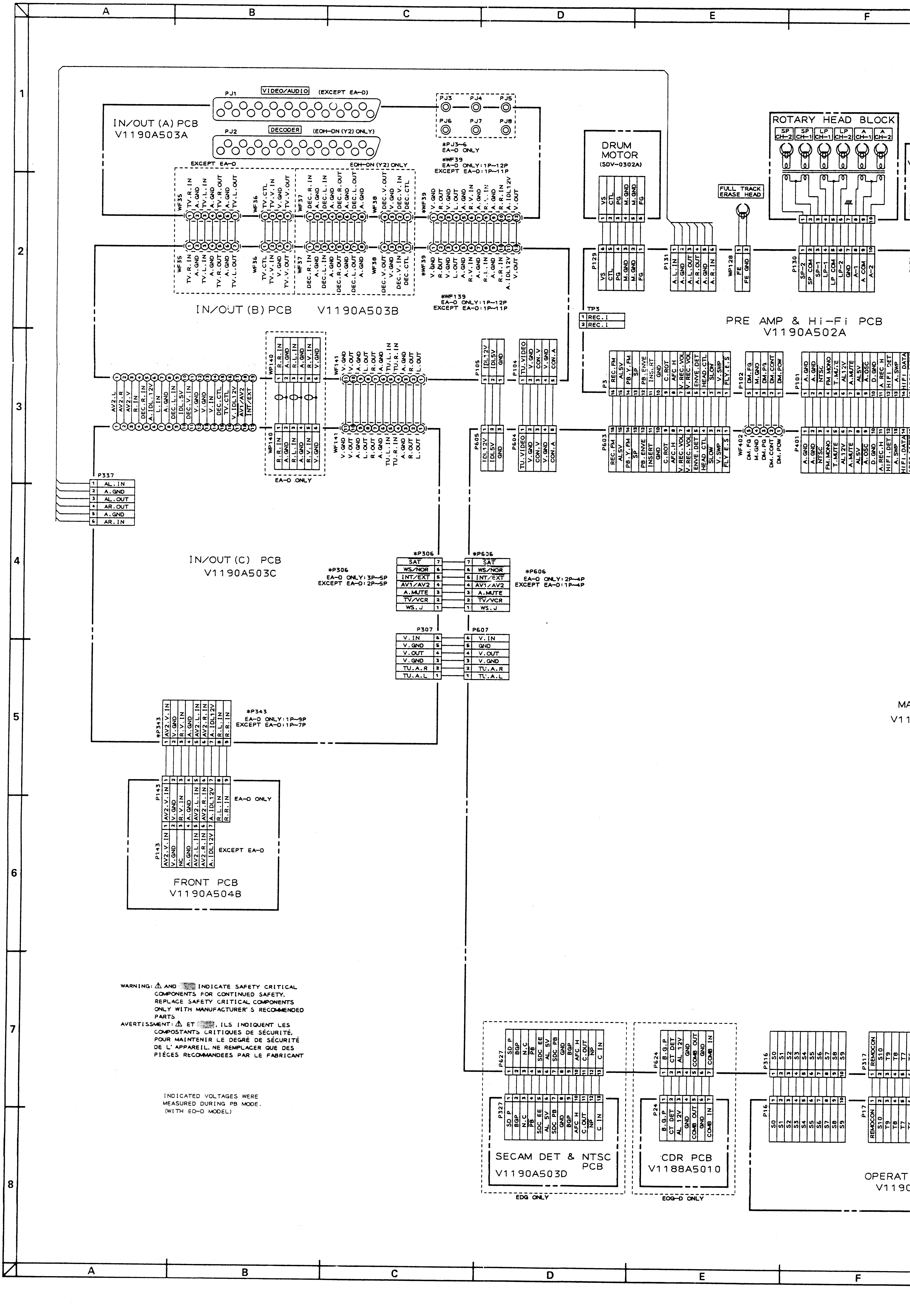
TR(B) PCB
V1190A501C


424616J.B.N
WF254
3
TR202
V1190A501B

TR(A)PCB
V1190A501B

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY,
REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S
RECOMMENDED PARTS

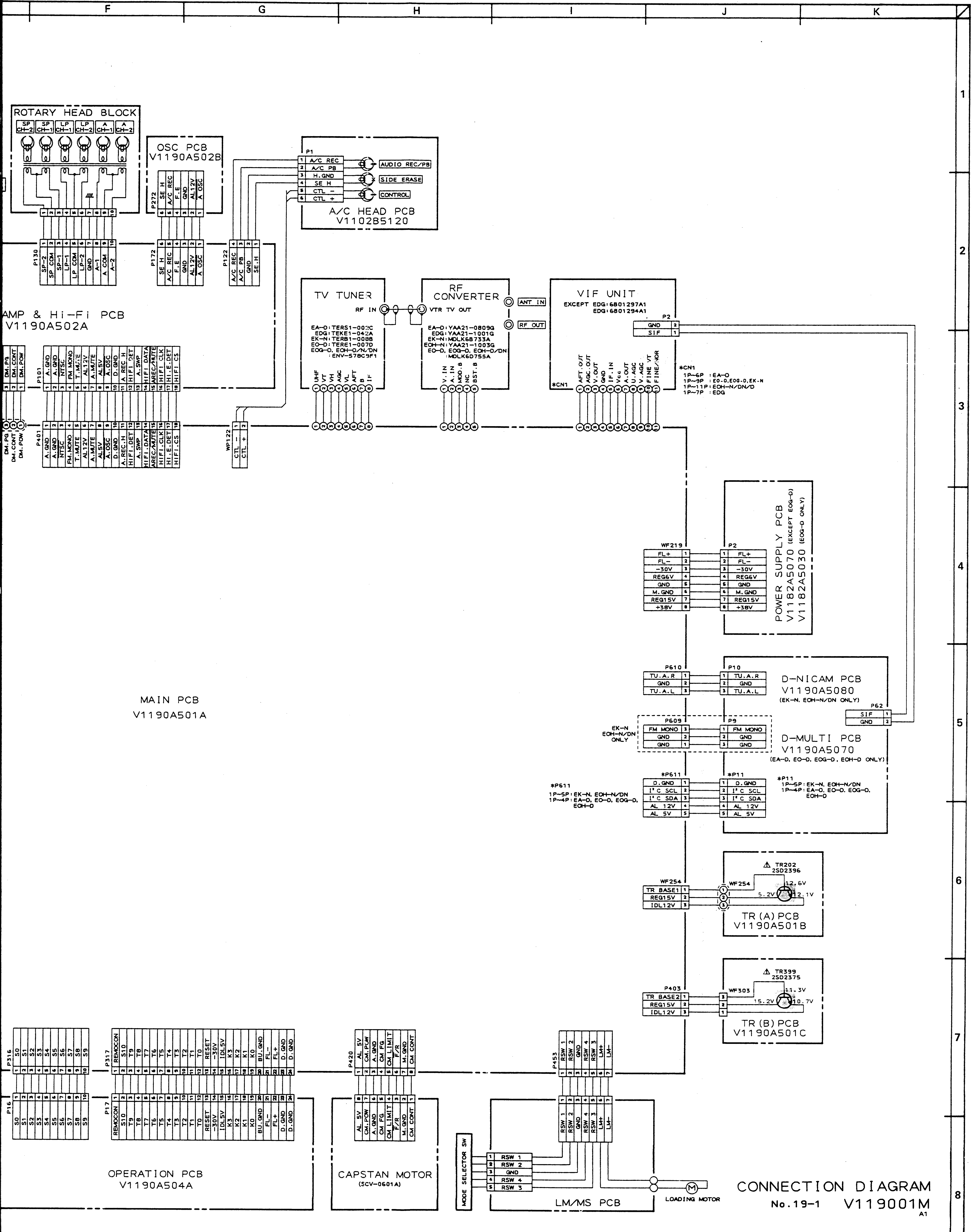
AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ.
POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL,
NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT


A
B
C
D
E
F
1
2
3
4
5
6
7
8
IN/OUT (A) PCB
V1190A503A
PJ1
VIDEO/AUDIO
(EXCEPT EA-D)
PJ2
DECODER
(EOH-ON (Y2) ONLY)
PJ3
PJ4
PJ5
PJ6
PJ7
PJ8
*PJ3-6
EA-D ONLY
*WF39
EA-D ONLY:1P~12P
EXCEPT EA-D:1P~11P
EXCEPT EA-D
EOH-ON (Y2) ONLY
WF35
TV.R.IN
A.GND
TV.L.IN
A.GND
TV.R.OUT
A.GND
TV.L.OUT
WF36
TV.CTL
TV.V.IN
V.GND
TV.V.OUT
WF37
DEC.R.IN
A.GND
DEC.L.IN
A.GND
DEC.R.OUT
A.GND
DEC.L.OUT
A.GND
WF38
DEC.V.OUT
V.GND
DEC.V.IN
DEC.CTL
*WF39
V.GND
R.OUT
V.GND
L.OUT
A.GND
R.V.IN
A.GND
R.L.IN
A.GND
R.R.IN
A.IDL12V
V.OUT
*WF139
EA-D ONLY:1P~12P
EXCEPT EA-D:1P~11P
IN/OUT (B) PCB
V1190A503B
DRUM
MOTOR
(SDV-0302A)
VS
CTL
PG
M.GND
M.GND
FG
P129
P131
A.L.IN
A.GND
A.L.OUT
A.R.OUT
A.GND
A.R.IN
FULL TRACK
ERASE HEAD
WP128
FE
FE GND
ROTARY HEAD BLOCK
SP CH-2
SP CH-1
LP CH-1
LP CH-2
A CH-1
A CH-2
P130
SP-2
SP COM
SP-1
LP-1
LP COM
LP-2
GND
A-1
A COM
A-2
TP3
1 REC.I
2 REC.I
PRE AMP & Hi-Fi PCB
V1190A502A
AV2.L
AV2.R
AV2.V
R.IN
DEC.R.IN
A.IDL.12V
L.IN
A.GND
DEC.L.IN
IDL.5V
DEC.V.IN
V.GND
V.IN
DEC.CTL
TV.CTL
V.IDL12V
AV1/AV2
INT/EXT
WP140
R.R.IN
A.GND
R.L.IN
A.GND
R.V.IN
V.GND
EA-D ONLY
WF141
V.GND
V.OUT
V.GND
L.OUT
A.GND
R.OUT
A.GND
TU.L.IN
TU.R.IN
A.GND
R.OUT
L.OUT
P105
IDL12V
IDL5V
GND
P104
TU.VIDEO
V.GND
CON.V
V.GND
CON.A
P605
P604
P3
REC.FM
AL5V
PB.Y.FM
SP
PB.ENVE
INSERT
GND
C.ROT
AFC.H
V.REC.VOL
V.REC.VOL
ENVE.DET
HEAD.CTL
SLOW
V.SWP
FLY.E.S
P603
P102
DM.FG
M.GND
DM.PG
DM.CONT
DM.POW
WF402
P101
A.GND
A.GND
NTSC
FM MONO
T.MUTE
AL12V
A.MUTE
AL5V
A.OSC
D.GND
A.REC.H
HIFI DET
A.SWP
HIFI DATA
P401
P337
1 AL.IN
2 A.GND
3 AL.OUT
4 AR.OUT
5 A.GND
6 AR.IN
IN/OUT (C) PCB
V1190A503C
*P306
EA-D ONLY:3P~5P
EXCEPT EA-D:2P~5P
*P306
SAT 7
WS/NOR 6
INT/EXT 5
AV1/AV2 4
A.MUTE 3
TV/VCR 2
WS.J 1
*P606
7 SAT
6 WS/NOR
5 INT/EXT
4 AV1/AV2
3 A.MUTE
2 TV/VCR
1 WS.J
*P606
EA-D ONLY:2P~4P
EXCEPT EA-D:1P~4P
P307
V.IN 6
V.GND 5
V.OUT 4
V.GND 3
TU.A.R 2
TU.A.L 1
P607
6 V.IN
5 GND
4 V.OUT
3 V.GND
2 TU.A.R
1 TU.A.L
*P343
AV2.V.IN
V.GND
R.V.IN
A.GND
AV2.L.IN
AV2.R.IN
A.IDL12V
R.L.IN
R.R.IN
*P343
EA-D ONLY:1P~9P
EXCEPT EA-D:1P~7P
P143
EA-D ONLY
P143
AV2.V.IN
V.GND
NC
A.GND
AV2.L.IN
AV2.R.IN
A.IDL12V
EXCEPT EA-D
FRONT PCB
V1190A504B
MA
V11
P627
SD P
BGP
N.C
PB
SDC EE
AL 5V
SDC PB
GND
BGP
AFC H
C.OUT
NP
C IN
P327
SECAM DET & NTSC PCB
V1190A503D
EDG ONLY
P624
B.G.P
CT DET
AL 12V
GND
COMB OUT
GND
COMB IN
P24
CDR PCB
V1188A5010
EOG-D ONLY
P316
S0
S1
S2
S3
S4
S5
S6
S7
S8
S9
P16
P317
REMOCON
S10
T9
T8
T7
P17
OPERAT
V119

WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ▨, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L' APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

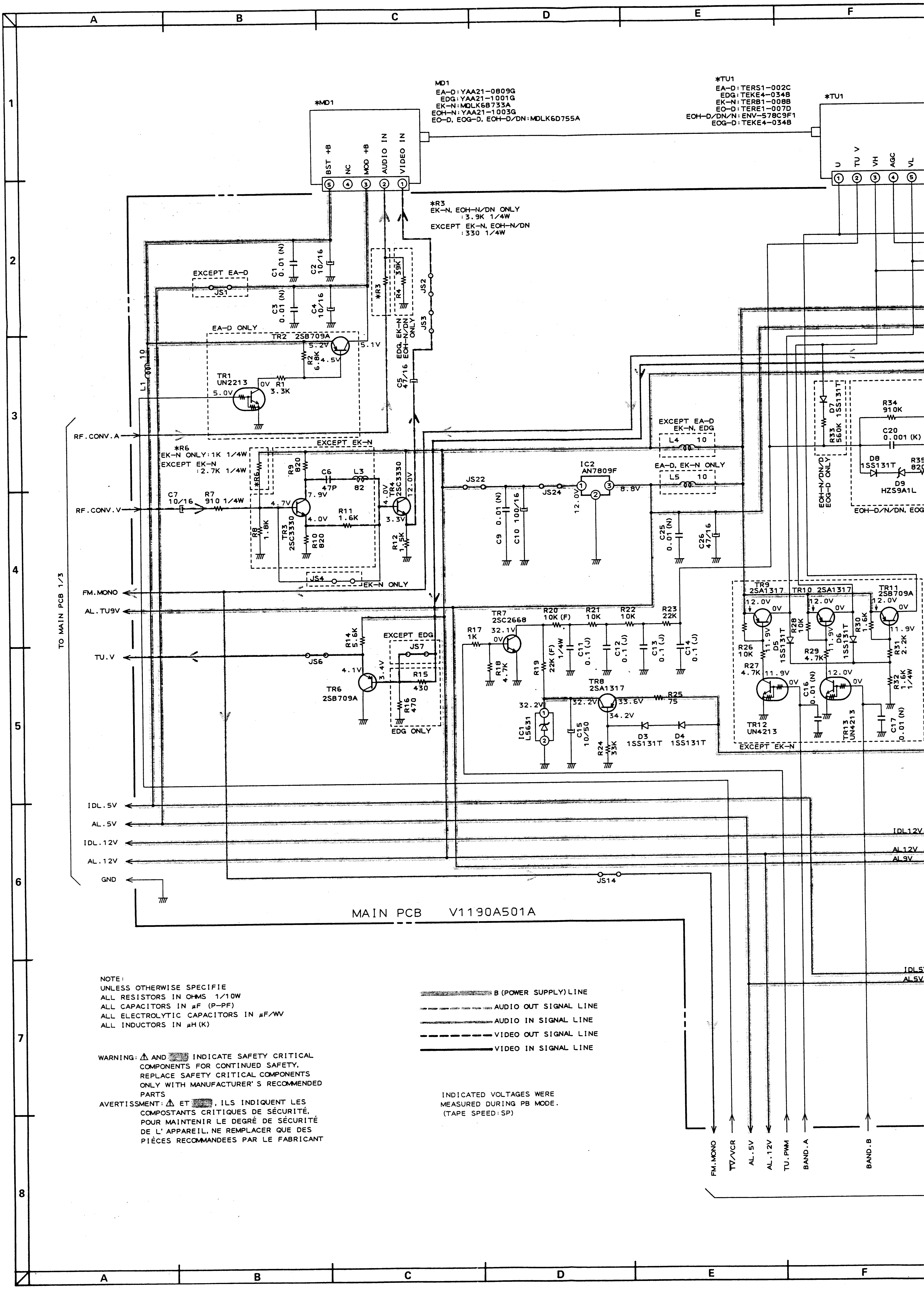
INDICATED VOLTAGES WERE MEASURED DURING PB MODE. (WITH EO-D MODEL)


ROTARY HEAD BLOCK
SP CH-2
SP CH-1
LP CH-1
LP CH-2
A CH-1
A CH-2
OSC PCB
V1190A502B
P272
SE H
A/C REC
F.E
GND
AL12V
A OSC
P1
A/C REC
A/C PB
H.GND
SE H
CTL -
CTL +
AUDIO REC/PB
SIDE ERASE
CONTROL
A/C HEAD PCB
V1102B5120
P130
SP-2
SP COM
SP-1
LP-1
LP COM
LP-2
GND
A-1
A COM
A-2
P172
P122
SE.H
AMP & Hi-Fi PCB
V1190A502A
TV TUNER
RF IN
EA-D:TERS1-002C
EDG:TEKE1-042A
EK-N:TERB1-008B
EO-D:TERE1-007D
EOG-D, EOH-D/N/DN
:ENV-57BC9F1
UHF
VT
VH
AGC
VL
AFT
B
IF
RF CONVERTER
VTR TV OUT
ANT IN
RF OUT
EA-D:YAA21-0809G
EDG:YAA21-1001G
EK-N:MDLK6B733A
EOH-N:YAA21-1003G
EO-D, EOG-D, EOH-D/DN
:MDLK6D755A
V.IN
A.IN
MOD.B
NC
BST.B
VIF UNIT
EXCEPT EDG:6B01297A1
EDG:6B01294A1
P2
GND
SIF
*CN1
AFT.OUT
AGC.OUT
V.OUT
GND
IF.IN
Vcc
A.OUT
U.AGC
V.AGC
FINE VT
FINE/VOR
*CN1
1P~6P :EA-D
1P~9P :EO-D,EOG-D,EK-N
1P~11P:EOH-N/DN/D
1P~7P :EDG
P101
DM.PG
DM.CONT
DM.POW
A.GND
NTSC
FM MONO
T.MUTE
AL12V
A.MUTE
AL5V
A.OSC
D.GND
A REC H
HIFI DET
A.SWP
HIFI DATA
AREC/MUTE
HIFI CLK
HI.E.DET
HIFI CS
P401
WP122
MAIN PCB
V1190A501A
POWER SUPPLY PCB
V1182A5070 (EXCEPT EOG-D)
V1182A5030 (EOG-D ONLY)
WF219
FL+
FL-
-30V
REG6V
GND
M.GND
REG15V
+38V
P610
P10
TU.A.R
TU.A.L
D-NICAM PCB
V1190A5080
(EK-N, EOH-N/DN ONLY)
P62
EK-N
EOH-N/DN
ONLY
P609
P9
FM MONO
D-MULTI PCB
V1190A5070
(EA-D, EO-D, EOG-D, EOH-D ONLY)
*P611
*P11
D.GND
I²C SCL
I²C SDA
AL 12V
AL 5V
*P611
1P~5P:EK-N, EOH-N/DN
1P~4P:EA-D, EO-D, EOG-D,
EOH-D
*P11
1P~5P:EK-N, EOH-N/DN
1P~4P:EA-D, EO-D, EOG-D,
EOH-D
WF254
TR BASE1
REG15V
IDL12V
TR202
2SD2396
12.6V
5.2V
12.1V
TR (A) PCB
V1190A501B
P403
TR BASE2
WF303
TR399
2SD2375
11.3V
15.2V
10.7V
TR (B) PCB
V1190A501C
P316
P16
S0
S1
S2
S3
S4
S5
S6
S7
S8
S9
P317
P17
REMOCON
S10
T9
T8
T7
T6
T5
T4
T3
T2
T1
T0
RESET
-30V
IDL5V
K3
K2
K1
K0
BU.GND
FL-
FL+
D.GND
OPERATION PCB
V1190A504A
P420
AL 5V
CM.POW
A.GND
CM FG
CM LIMIT
F/R
M.GND
CM CONT
CAPSTAN MOTOR
(SCV-0601A)
P453
RSW 1
RSW 2
GND
RSW 4
RSW 3
LM+
LM-
MODE SELECTOR SW
LM/MS PCB
LOADING MOTOR
M
F
G
H
I
J
K
1
2
3
4
5
6
7
8
9

CONNECTION DIAGRAM

No.19-1 V119001M

A1

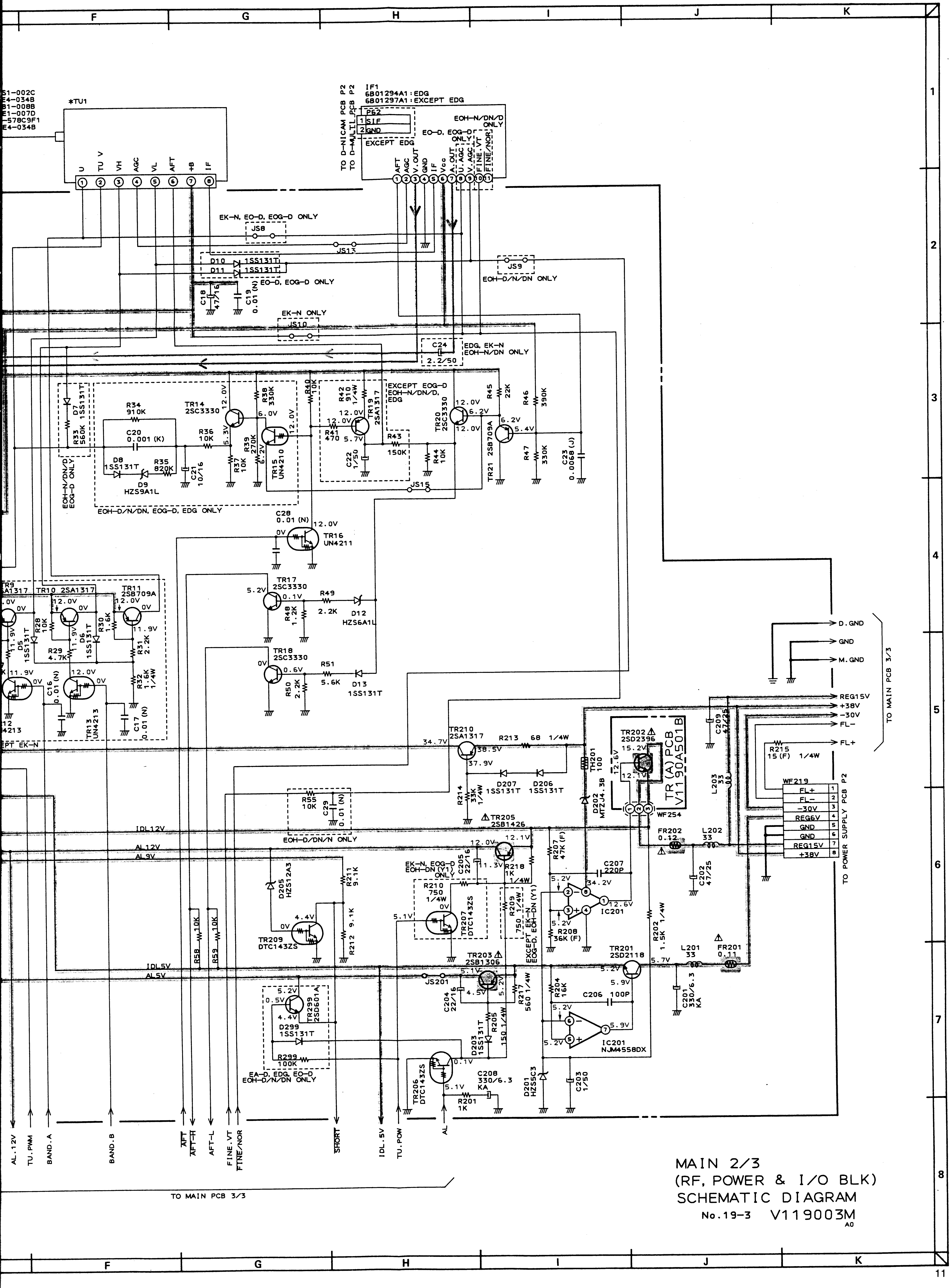

A
B
C
D
E
F
1
2
3
4
5
6
7
8
MD1
EA-D: YAA21-0809G
EDG: YAA21-1001G
EK-N: MDLK6B733A
EOH-N: YAA21-1003G
EO-D, EOG-D, EOH-D/DN: MDLK6D755A
*MD1
BST +B
NC
MOD +B
AUDIO IN
VIDEO IN
*TU1
EA-D: TERS1-002C
EDG: TEKE4-034B
EK-N: TERB1-008B
EO-D: TERE1-007D
EOH-D/DN/N: ENV-578C9F1
EOG-D: TEKE4-034B
*TU1
U
TU V
VH
AGC
VL
*R3
EK-N, EOH-N/DN ONLY
: 3.9K 1/4W
EXCEPT EK-N, EOH-N/DN
: 330 1/4W
EXCEPT EA-D
JS1
C1 0.01 (N)
C2 10/16
C3 0.01 (N)
C4 10/16
*R3
R4 39K
JS2
JS3
EDG, EK-N EOH-N/DN ONLY
EA-D ONLY
TR2 2SB709A
5.2V
4.5V
5.1V
R2 6.8K
TR1 UN2213
0V
R1 3.3K
5.0V
L1 10
C5 47/16
RF.CONV.A
*R6
EK-N ONLY: 1K 1/4W
EXCEPT EK-N : 2.7K 1/4W
EXCEPT EK-N
R9 820
C6 47P
L3 82
7.9V
4.0V TR4 2SC3330
12.0V
RF.CONV.V
C7 10/16
R7 910 1/4W
4.7V
R11 1.6K
4.0V
3.3V
R8 1.8K
TR3 2SC3330
R10 820
R12 1.5K
JS4
EK-N ONLY
TO MAIN PCB 1/3
FM.MONO
AL.TU9V
TU.V
JS6
R14 5.6K
EXCEPT EDG
JS7
R15 430
4.1V
3.4V
TR6 2SB709A
R16 470
EDG ONLY
JS22
C9 0.01 (N)
C10 100/16
JS24
IC2 AN7809F
12.0V
8.8V
EXCEPT EA-D EK-N, EDG
L4 10
EA-D, EK-N ONLY
L5 10
C25 0.01 (N)
C26 47/16
TR7 2SC2668
R17 1K
32.1V
0V
R18 4.7K
R20 10K (F)
R21 10K
R22 10K
R23 22K
R19 22K (F) 1/4W
C11 0.1 (J)
C12 0.1 (J)
C13 0.1 (J)
C14 0.1 (J)
TR8 2SA1317
R25 75
32.2V
32.2V
33.6V
34.2V
IC1 L5631
C15 10/50
R24 33K
D3 1SS131T
D4 1SS131T
D7 1SS131T
R33 560K
EOH-N/DN/N EOG-D ONLY
R34 910K
C20 0.001 (K)
D8 1SS131T
R35 820
D9 HZS9A1L
EOH-D/DN, EOG
TR9 2SA1317
TR10 2SA1317
TR11 2SB709A
12.0V
0V
12.0V
0V
12.0V
0V
R26 10K
11.9V
D5 1SS131T
R28 10K
11.9V
D6 1SS131T
R30 1.6K
11.9V
R31 2.2K
R27 4.7K
11.9V
R29 4.7K
12.0V
0V
0V
R32 1.6K 1/4W
C16 0.01 (N)
C17 0.01 (N)
TR12 UN4213
TR13 UN4213
EXCEPT EK-N
IDL.5V
AL.5V
IDL.12V
AL.12V
GND
JS14
IDL12V
AL12V
AL9V
IDL5V
AL5V
MAIN PCB V1190A501A
FM.MONO
TV/VCR
AL.5V
AL.12V
TU.PWM
BAND.A
BAND.B
B (POWER SUPPLY) LINE
AUDIO OUT SIGNAL LINE
AUDIO IN SIGNAL LINE
VIDEO OUT SIGNAL LINE
VIDEO IN SIGNAL LINE

NOTE:
UNLESS OTHERWISE SPECIFIE
ALL RESISTORS IN OHMS 1/10W
ALL CAPACITORS IN µF (P-PF)
ALL ELECTROLYTIC CAPACITORS IN µF/WV
ALL INDUCTORS IN µH (K)

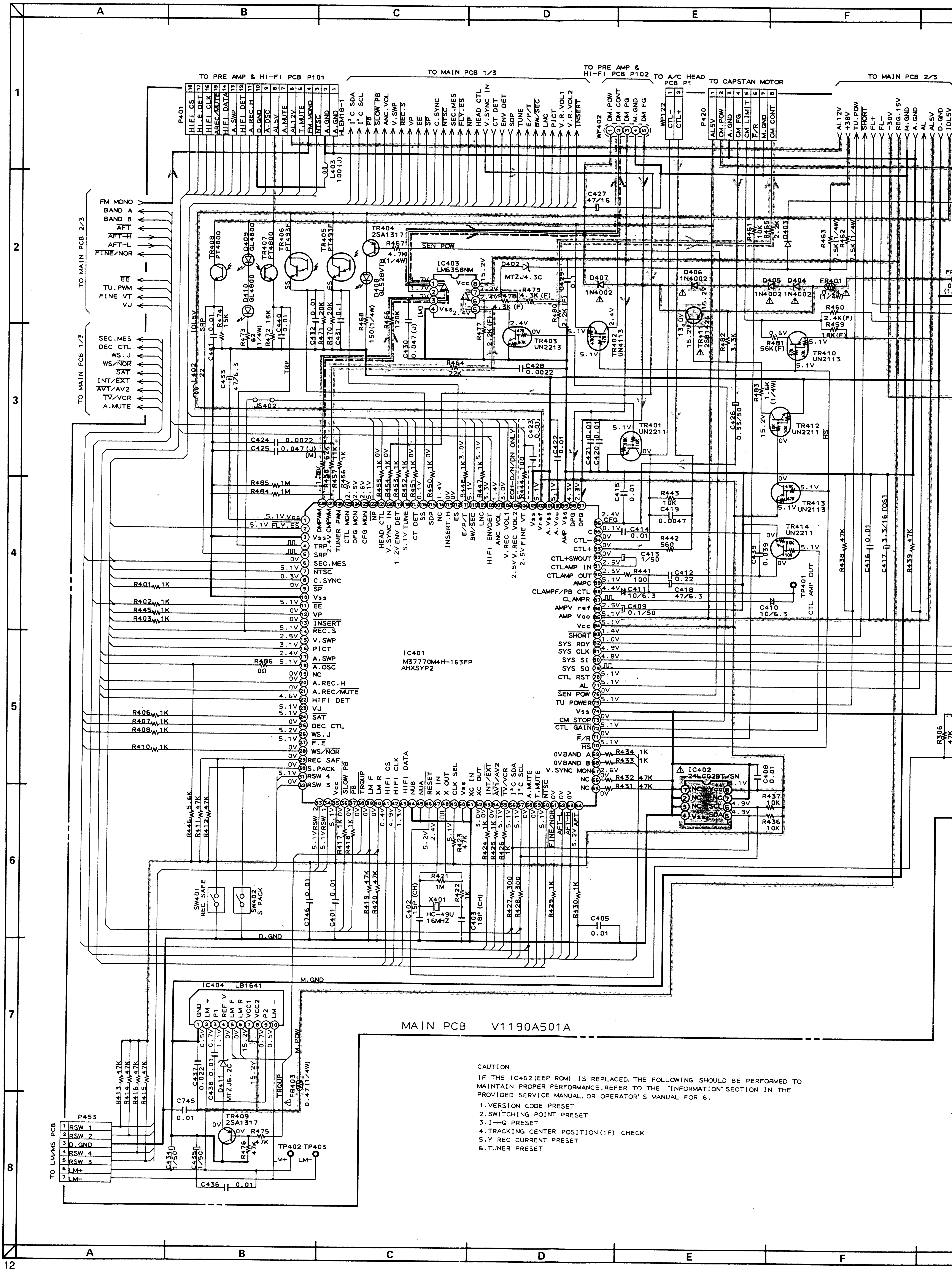
WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ▨, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

INDICATED VOLTAGES WERE MEASURED DURING PB MODE.
(TAPE SPEED: SP)


F
G
H
I
J
K
1
2
3
4
5
6
7
8
S1-002C
E4-034B
B1-008B
E1-007D
-578C9F1
E4-034B
*TU1
U
TU V
VH
AGC
VL
AFT
+B
IF
TO D-NICAM PCB P2
TO D-MULTI PCB P2
IF1
6B01294A1:EDG
6B01297A1:EXCEPT EDG
P62
1 SIF
2 GND
EXCEPT EDG
EO-D, EOG-D ONLY
EOH-N/DN/D ONLY
AFT
AGC
V.OUT
GND
IF
Vcc
A.OUT
U.AGC
V.AGC
FINE.VT
FINE/NOR
EK-N, EO-D, EOG-D ONLY
JS8
JS13
D10 1SS131T
D11 1SS131T
EO-D, EOG-D ONLY
JS9
EOH-D/N/DN ONLY
C18 47/16
C19 0.01 (N)
EK-N ONLY
JS10
C24 2.2/50
EDG, EK-N
EOH-N/DN ONLY
D7 1SS131T
R33 560K
EOH-N/DN/D
EOG-D ONLY
R34 910K
C20 0.001 (K)
D8 1SS131T
D9 HZS9A1L
R35 820K
C21 10/16
R36 10K
TR14 2SC3330
R37 10K
R38 330K
R39 270K
TR15 UN4210
EOH-D/N/DN, EOG-D, EDG ONLY
R40 10K
R42 910 1/4W
TR19 2SA1317
R41 470
C22 1/50
R43 150K
R44 10K
EXCEPT EOG-D
EOH-N/DN/D,
EDG
TR20 2SC3330
R45 22K
TR21 2SB709A
R46 390K
R47 330K
C23 0.0068 (J)
JS15
C28 0.01 (N)
TR16 UN4211
TR17 2SC3330
R48 1.2K
R49 2.2K
D12 HZS6A1L
TR18 2SC3330
R50 2.2K
R51 5.6K
D13 1SS131T
TR9 2SA1317
TR10 2SA1317
TR11 2SB709A
R28 10K
D5 1SS131T
R29 4.7K
D6 1SS131T
R30 1.6K
R31 2.2K
R32 1.6K 1/4W
C16 0.01 (N)
TR12 UN4213
TR13 UN4213
C17 0.01 (N)
EPT EK-N
TR210 2SA1317
R213 68 1/4W
R214 33K 1/4W
D207 1SS131T
D206 1SS131T
TH201 100
D202 MTZJ4.3B
TR202 2SD2396
TR (A) PCB V1190A501B
WF254
R55 10K
C29 0.01 (N)
EOH-D/DN/N ONLY
IDL12V
AL12V
AL9V
TR205 2SB1426
R207 47K (F)
R218 1K 1/4W
C205 22/16
EK-N, EOG-D
EOH-DN (Y1) ONLY
R210 750 1/4W
TR207 DTC143ZS
R209 750 1/4W
EXCEPT EK-N
EOG-D, EOH-DN (Y1)
C207 220P
IC201
R208 36K (F)
D205 HZS12A3
R211 9.1K
R212 9.1K
TR209 DTC143ZS
R58 10K
R59 10K
IDL5V
AL5V
JS201
TR203 2SB1306
C204 22/16
D203 1SS131T
R205 150 1/4W
R217 560 1/4W
R204 16K
C206 100P
IC201 NJM4558DX
R202 1.5K 1/4W
TR201 2SD2118
L201 33
FR201 0.11
C201 330/6.3 KA
TR299 2SD601A
D299 1SS131T
R299 100K
EA-D, EDG, EO-D
EOH-D/N/DN ONLY
TR206 DTC143ZS
C208 330/6.3 KA
R201 1K
D201 HZS5C3
C203 1/50
C209 47/25
L203 33
FR202 0.12
L202 33
C202 47/25
R215 15 (F) 1/4W
WF219
FL+
FL-
-30V
REG6V
GND
GND
REG15V
+38V
TO POWER SUPPLY PCB P2
D.GND
GND
M.GND
REG15V
+38V
-30V
FL-
FL+
TO MAIN PCB 3/3
AL.12V
TU.PWM
BAND.A
BAND.B
AFT
AFT-H
AFT-L
FINE.VT
FINE/NOR
SHORT
IDL.5V
TU.POW
AL
TO MAIN PCB 3/3

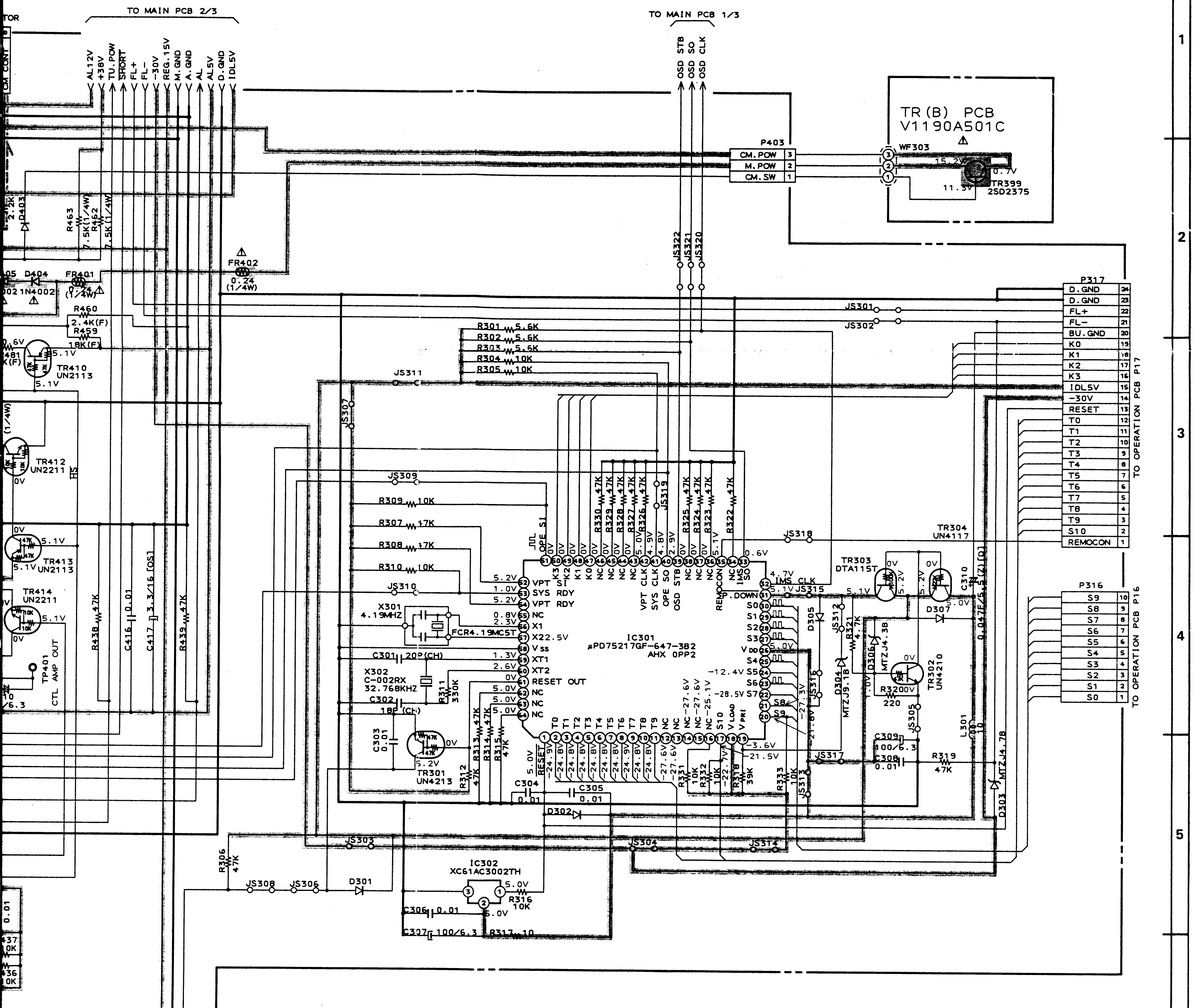
MAIN 2/3
(RF, POWER & I/O BLK)
SCHEMATIC DIAGRAM
No.19-3 V119003M
A0


A
B
C
D
E
F
1
2
3
4
5
6
7
8
TO PRE AMP & HI-FI PCB P101
TO MAIN PCB 1/3
TO PRE AMP & HI-FI PCB P102
TO A/C HEAD PCB P1
TO CAPSTAN MOTOR
TO MAIN PCB 2/3
P401
HI FI CS
HI.F.DET
HI FI CLK
AREC/MUTE
HI FI DATA
A.SWP
HI FI DET
A.REC.H
D.GND
A.OSC
AL5V
A.MUTE
AL12V
T.MUTE
FM.MONO
NTSC
A.GND
HLEM18-1
L403 100(J)
I²C SDA
I²C SCL
PB
SLOW PB
ANC.VOL
V.SWP
REC.S
VP
EE
SP
C.SYNC
NTSC
SEC.MES
FLY.ES
NP
HEAD CTL
V.SYNC IN
CT DET
ENV DET
SDP
TUNE
E/P/T
BW/SEC
LNC
PICT
V.R.VOL1
V.R.VOL2
INSERT
WF402
CM.POW
CM CONT
DM FG
M.GND
DM FG
WP122
CTL-
CTL+
P420
AL5V
CM.POW
A.GND
CM FG
CM LIMIT
F/R
M.GND
CM CONT
AL12V
+38V
TU.POW
SHORT
FL+
FL-
-30V
REG.15V
M.GND
A.GND
AL
AL5V
D.GND
IDL5V
FM MONO
BAND A
BAND B
AFT
AFT-H
AFT-L
FINE/NOR
TO MAIN PCB 2/3
EE
TU.PWM
FINE VT
VJ
SEC.MES
DEC CTL
WS.J
WS/NOR
SAT
INT/EXT
AVT/AV2
TV/VCR
A.MUTE
TO MAIN PCB 1/3
TR408 PT4800
D409 GL4800
TR407 PT4800
TR406 PT493F
TR405 PT493F
TR404 2SA1317
R467 4.7K (1/4W)
SEN POW
D408 GL528VTB
D410 GL4800
IC403 LM6358NM
D402 MTZJ4.3C
R479 4.3K (F)
R478 4.3K (F)
C427 47/16
D407 1N4002
D406 1N4002
D405 1N4002
D404 1N4002
D403
FR401 0.24 (1/4W)
R461 10K
R465 2.2K
R463 7.5K(1/4W)
R462 7.5K(1/4W)
R460 2.4K(F)
R459 18K(F)
R481 56K(F)
TR410 UN2113
TR411 2SB1426
TR402 UN4113
TR403 UN2213
R482 3.3K
R480 2.2K (F)
C429 0.1
IDL5V
SRP
R474 15K
R473 62 (1/4W)
R472 15K
C440 0.01
C441 0.01
L402 22
C433 47/6.3
TRP
C432 0.01
R471 20K
R470 20K
C431 0.1
R468 150(1/4W)
R466 120K
C430 0.047 (J)
R477 2.2K (F)
R476 2.2K (F)
R464 22K
C428 0.0022
JS402
R483 1.6K (1/4W)
C426 0.33/50
TR412 UN2211
TR401 UN2211
C424 0.0022
C425 0.047 (J)
C423 0.01
C422 0.01
C421 0.01
C420 0.01
R485 1M
R484 1M
R458 62K
R457 11K
R456 1K
R455 1K
R454 1K
R453 1K
R452 1K
R451 1K
R450 1K
R449 3.0V
R448 1K
R447 1K
R446 1K
R445 1K
R444 100
C415 0.01
R443 10K
C419 0.0047
C414 0.01
R442 560
C413 1/50
R441 100
C412 0.22
C411 10/6.3
C418 47/6.3
C409 0.1/50
TR413 UN2113
TR414 UN2211
C439 0.039
TP401 CTL AMP OUT
C410 10/6.3
R438 47K
C416 0.01
C417 3.3/16 (OS)
R439 47K
IC401 M37770M4H-163FP AHXSYP2
Vcc
FLY.ES
Vss
TRP
SRP
SEC.MES
NTSC
C.SYNC
SP
Vss
EE
VP
INSERT
REC.S
V.SWP
PICT
A.SWP
A.OSC
NC
A.REC.H
A.REC/MUTE
HIFI DET
VJ
SAT
DEC CTL
WS.J
F.E
WS/NOR
REC SAF
S.PACK
RSW 4
RSW 3
DMPWM
CMPWM
TUNER PWM
CTL MON
DFG MON
CFG MON
NP
HEAD CTL
V.SYNC IN
ENV DET
TUNE
CT DET
SS
SDP
NC
INSERT.H
ES
E/P/T
BW/SEC
LNC
HIFI ENVDET
ANC VOL
V.REC VOL1
V.REC VOL2
FINE VT
Vss
Vref
A.Vcc
AMP Vss
DPG
DFG
CFG
CTL-
CTL+
CTL+SWOUT
CTLAMP IN
CTLAMP OUT
AMPC
CLAMPF/PB CTL
CLAMPR
AMPV ref
AMP Vcc
Vcc
SHORT
SYS RDY
SYS CLK
SYS SI
SYS SO
CTL RST
AL
SEN POW
TU POWER
Vss
CM STOP
CTL GAIN
F/R
HS
BAND A
BAND B
V.SYNC MON
NC
NC
R434 1K
R433 1K
R432 47K
R431 47K
IC402 24LC02BT/SN
NC
Vcc
WC
SCL
SDA
Vss
C408 0.01
R437 10K
R436 10K
Vcc
SLOW PB
PB
TRQUP
LM F
LM R
HIFI CS
HIFI CLK
HIFI DATA
NUB
NUA
RESET
X IN
X OUT
CLK SEL
Vss
XC IN
XC OUT
INT/EXT
AVT/AV2
TV/VCR
I²C SCL
I²C SDA
A.MUTE
T.MUTE
NTSC
FINE/NOR
AFT-L
AFT-H
AFT
R401 1K
R402 1K
R445 1K
R403 1K
R486 0Ω
R406 1K
R407 1K
R408 1K
R410 1K
R446 5.6K
R411 47K
R412 47K
R417 1K
R418 1K
R419 47K
R420 47K
R421 1M
R422 1K
R423 47K
R424 1K
R425 1K
R426 1K
R427 300
R428 300
R429 1K
R430 1K
C746 0.01
C401 0.01
C402 15P (CH)
X401 HC-49U 16MHZ
C403 18P (CH)
C405 0.01
SW401 REC SAFE
SW402 S PACK
D.GND
M.GND
IC404 LB1641
GND
LM +
P1
REF V
LM R
VCC1
VCC2
P2
LM -
M.POW
C437 0.022
C438 0.01
D411 MTZJ6.2C
TRQUP
FR403 0.47 (1/4W)
C745 0.01
TR409 2SA1317
R475 47K
R476 47K
C434 1/50
C435 1/50
C436 0.01
TP402 LM+
TP403 LM-
R413 47K
R414 47K
R416 47K
R415 47K
P453
RSW 1
RSW 2
D.GND
RSW 4
RSW 3
LM+
LM-
TO LM/MS PCB
R306 47K
MAIN PCB V1190A501A

CAUTION

IF THE IC402(EEP ROM) IS REPLACED. THE FOLLOWING SHOULD BE PERFORMED TO MAINTAIN PROPER PERFORMANCE. REFER TO THE "INFORMATION" SECTION IN THE PROVIDED SERVICE MANUAL. OR OPERATOR' S MANUAL FOR 6.

1. VERSION CODE PRESET
2. SWITCHING POINT PRESET
3. I-HQ PRESET
4. TRACKING CENTER POSITION (1F) CHECK
5. Y REC CURRENT PRESET
6. TUNER PRESET


TO MAIN PCB 2/3
AL12V
+38V
TU.POW
SHORT
FL+
FL−
−30V
REG.15V
M.GND
A.GND
AL
AL5V
D.GND
IDL5V
TO MAIN PCB 1/3
OSD STB
OSD SO
OSD CLK
TR(B) PCB
V1190A501C
WF303
TR399
2SD2375
P403
CM.POW
M.POW
CM.SW
JS322
JS321
JS320
FR402
0.24
(1/4W)
FR401
D404
1N4002
R460
2.4K(F)
R459
18K(F)
TR410
UN2113
TR412
UN2211
TR413
UN2113
TR414
UN2211
TP401
CTL AMP OUT
R438 47K
C416 0.01
C417 3.3/16 [OS]
R439 47K
R463
R462
7.5K(1/4W)
P317
D.GND
FL+
FL−
BU.GND
K0
K1
K2
K3
IDL5V
−30V
RESET
T0
T1
T2
T3
T4
T5
T6
T7
T8
T9
S10
REMOCON
TO OPERATION PCB P17
P316
S9
S8
S7
S6
S5
S4
S3
S2
S1
S0
TO OPERATION PCB P16
JS301
JS302
R301 5.6K
R302 5.6K
R303 5.6K
R304 10K
R305 10K
JS311
JS307
JS309
R309 10K
R307 47K
R308 47K
R310 10K
JS310
X301
4.19MHZ
FCR4.19MC5T
X302
C-002RX
32.768KHZ
C301 20P(CH)
C302 18P(CH)
C303 0.01
R311 330K
TR301
UN4213
R312 47K
R313 47K
R314 47K
R315 47K
IC301
μPD75217GF-647-3B2
AHX 0PP2
VPT ST
SYS RDY
VPT RDY
X1
X2
VSS
XT1
XT2
RESET OUT
R330 47K
R329 47K
R328 47K
R327 47K
R326 47K
JS319
R325 47K
R324 47K
R323 47K
R322 47K
JS318
IMS CLK
JS315
P.DOWN
REMOCON
TR304
UN4117
TR303
DTA115T
C310 0.047F/5.5V(Z)[D]
D307
D305
JS312
R321 4.7K
D304 MTZJ9.1B
D306 MTZJ4.3B
TR302
UN4210
R320 220
JS305
C309 100/6.3
C308 0.01
R319 47K
L301 10
D303 MTZJ4.7B
JS317
JS316
JS313
R331 10K
R332 10K
R318 39K
R333 10K
C304 0.01
C305 0.01
D302
JS303
JS304
JS314
R306 47K
JS308
JS306
D301
IC302
XC61AC3002TH
R316 10K
C306 0.01
C307 100/6.3
R317 10
F
G
H
I
J
K
1
2
3
4
5
6
7
8

▨ B (POWER SUPPLY) LINE
┄ CAPSTAN MOTOR PHASE CONTROL LINE
─ CAPSTAN MOTOR SPEED CONTROL LINE
╍ DRUM MOTOR PHASE CONTROL LINE
━ DRUM MOTOR SPEED CONTROL LINE
━ ‑ ━ AUDIO IN SIGNAL LINE

NOTE;
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/10W OR 1/4W(J)
ALL CAPACITORS IN μF (P=PF) (J)
ALL ELECTROLYTIC CAPACITORS IN μF/WV (M)
[D] IS ELECTRIC DOUBLE LAYER CAPACITOR
ALL DIODES ARE 1SS131
ALL INDUCTORS IN μH(K)

WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

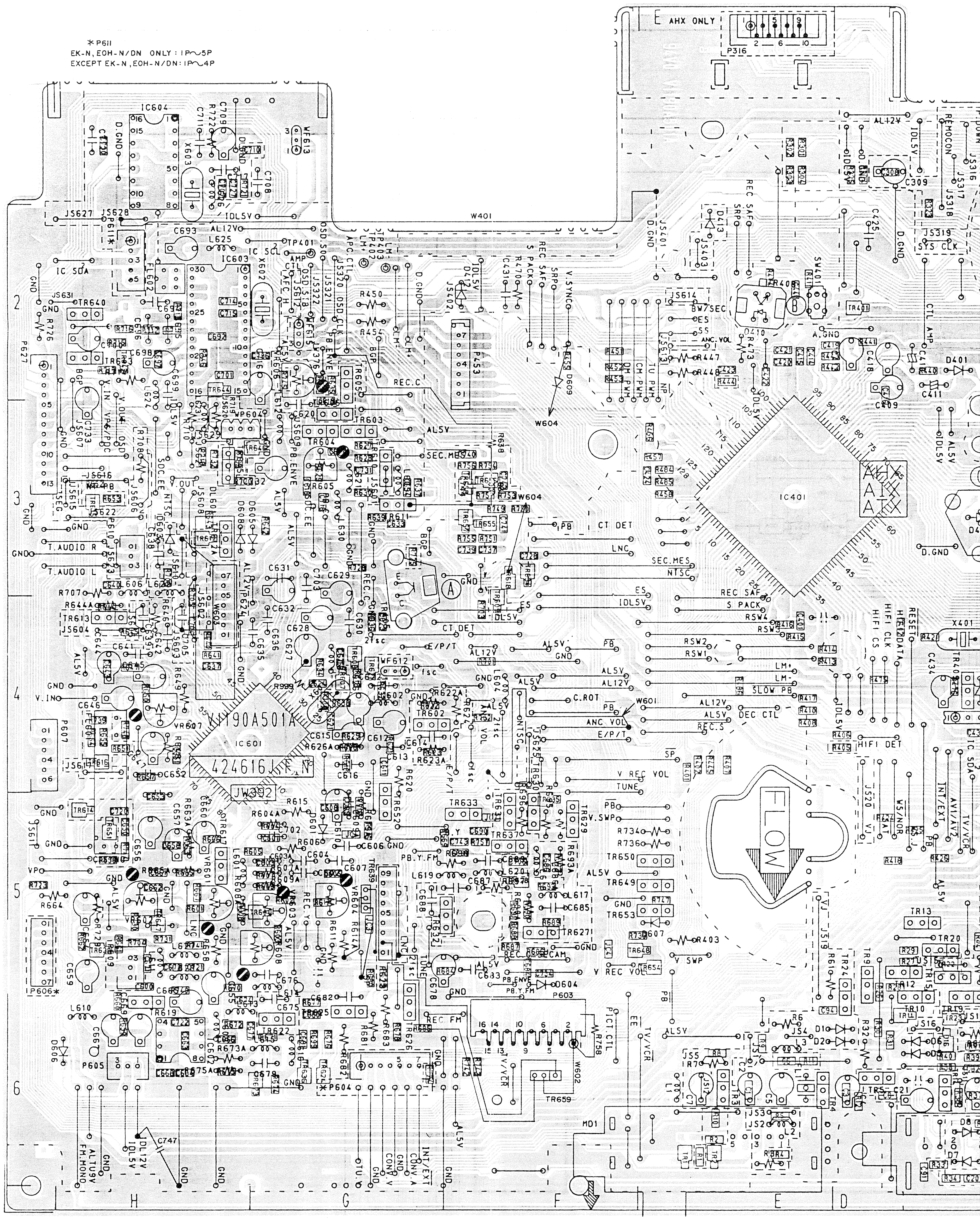
AVERTISSMENT: ⚠ ET ▨, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

INDICATED VOLTAGES WERE
MEASURED DURING PB MODE.
(TAPE SPEED: SP)

RMED TO
N THE

MAIN 3/3
(SERVO/SYSCON BLK)
SCHEMATIC DIAGRAM
No.19-4 V119004M
A0

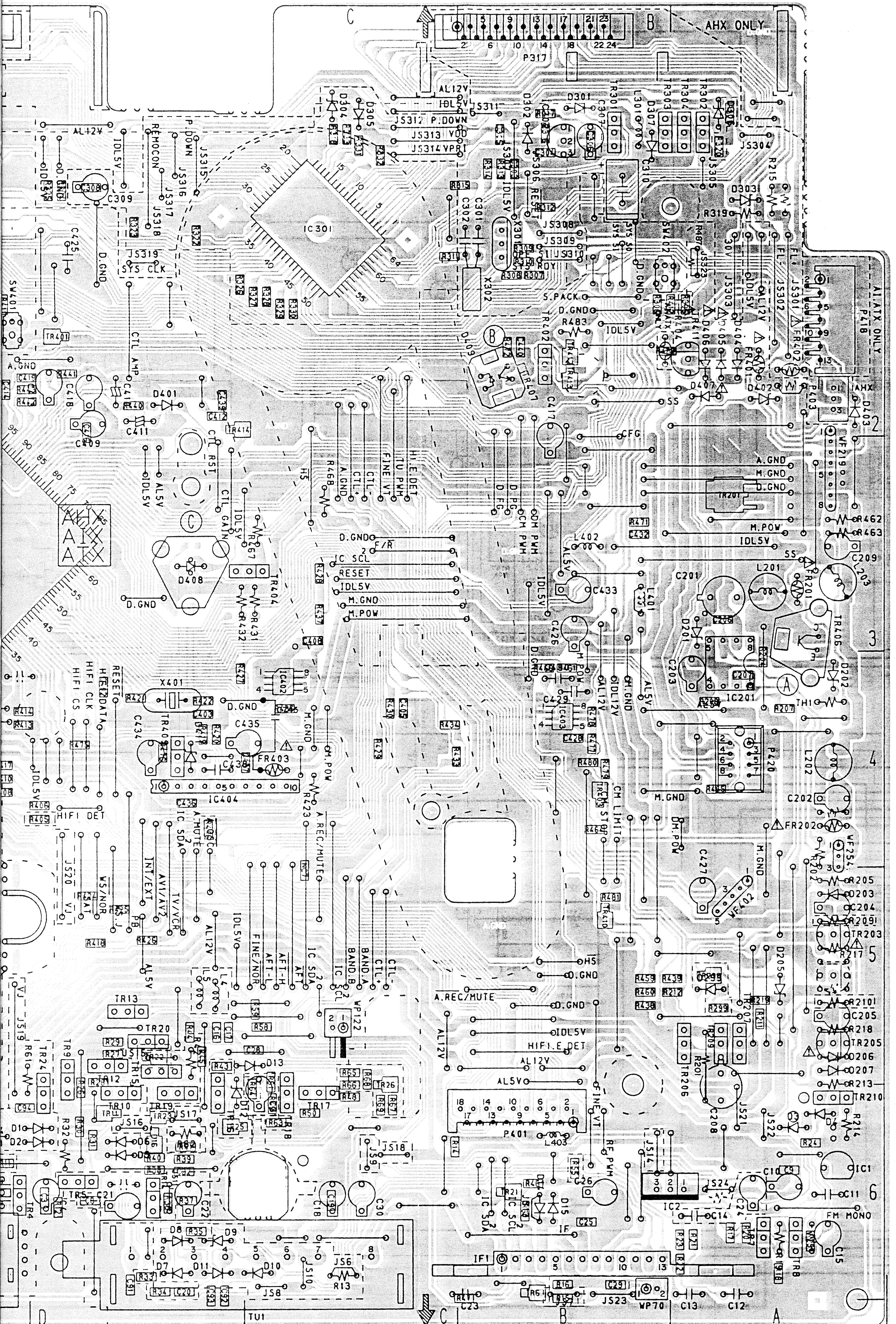
*P611
EK-N, EOH-N/DN ONLY : 1P~5P
EXCEPT EK-N, EOH-N/DN : 1P~4P


AHX ONLY
P316
IC604
IC603
IC601
V1190A501A
424616J
JW392
IC401
X401
X602
X603
W401
W601
W602
W603
W604
P603
P604
P605
P606*
P607
P627
P453
TR603
TR604
TR613
TR633
TR650
TR649
TR653
TR627
TR659
FLOW
MD1
T.AUDIO R
T.AUDIO L
V.IN
GND
AL5V
AL12V
IDL5V
D.GND
CT DET
SEC.MES
REC SAF
S PACK
LM+
LM-
SLOW PB
DEC CTL
HIFI DET
V REC VOL
TUNE
V.SWP
REC FM
TV/VCR
INT/EXT
ALTU9V
FM.MONO
H
G
F
E
D
2
3
4
5
6

*P606
EA-D ONLY: 3P~5P
EXCEPT EA-D: 2P~5P

*P604 1P~5P

MAIN PCB V1190A501A


C
B
A
D
C
B
A
AHX ONLY
P317
AL/ATX ONLY
P418
IC301
IC201
IC402
IC403
IC404
X401
X301
X302
P401
P420
TU1
IF1
WP70
WF219
WF254
WP402
WP122
D408
1
2
3
4
5
6
FM MONO
D.GND
A.GND
M.GND
M.POW
IDL5V
AL5V
AL12V
IC SCL
IC SDA
RESET
HIFI DET
CTL AMP
CFG
S.PACK
A.REC/MUTE

501A

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER. REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

PRINCIPAL PARTS LOCATION

ICs

IC2	A,B6
IC201	A4
IC301	C2
IC302	B2
IC401	E3
IC402	C4
IC403	B4
IC404	C,D4
IC601	G,H4
IC602	H6
IC603	H2
IC604	H2

WF & WPs

WF219	A3
WF254	A4
WP402	A5
WP122	C5

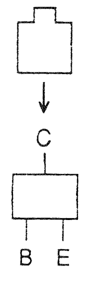
CONNECTORs

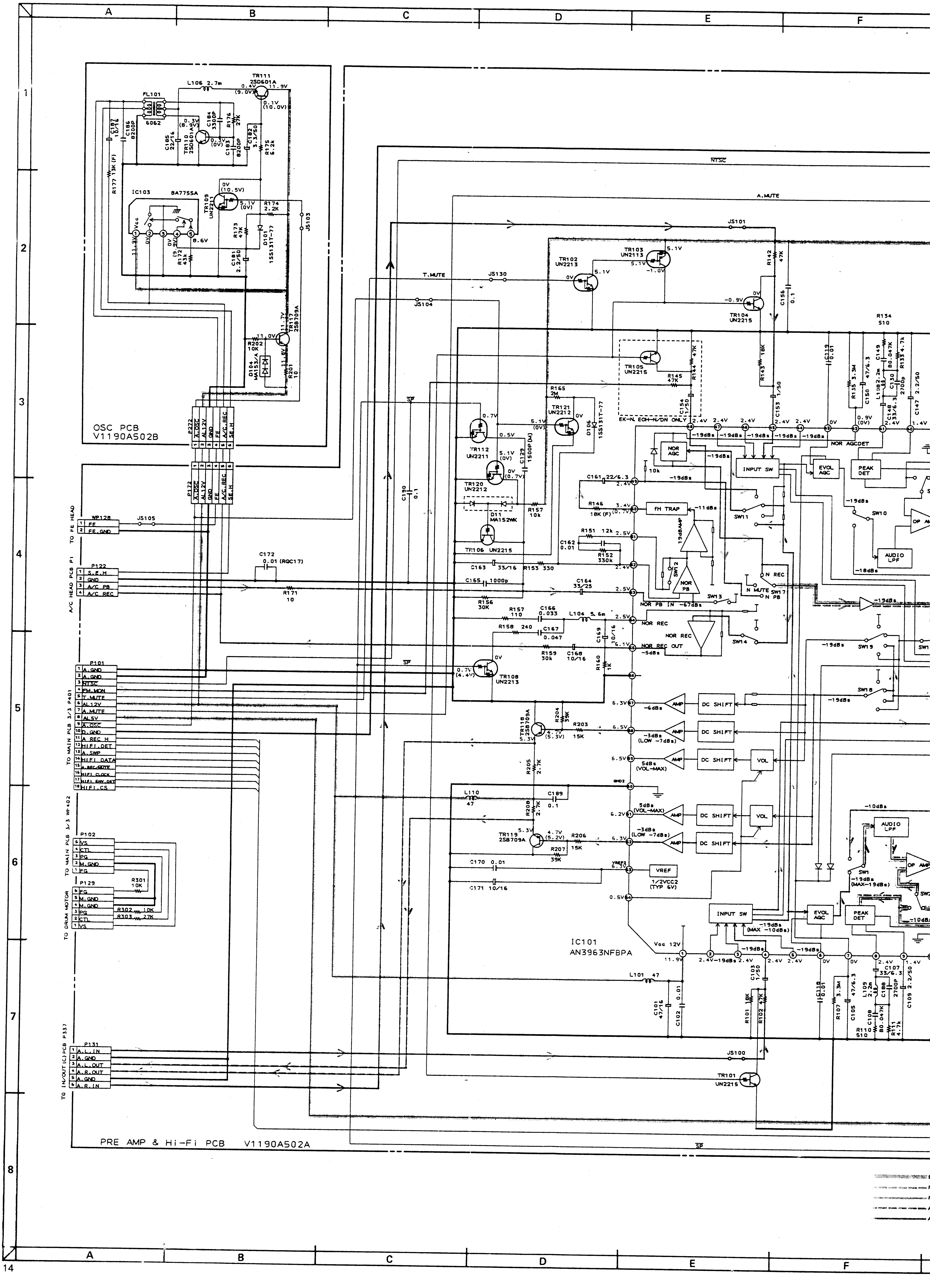
P316	E2
P317	B2
P401	B6
P403	A2
P420	A4
P453	F2
P603	F6
P604	G6
P605	H6
P606	H5
P607	H4
P609	H5
P610	H3
P611	H2
P624	H4
P627	H2,3

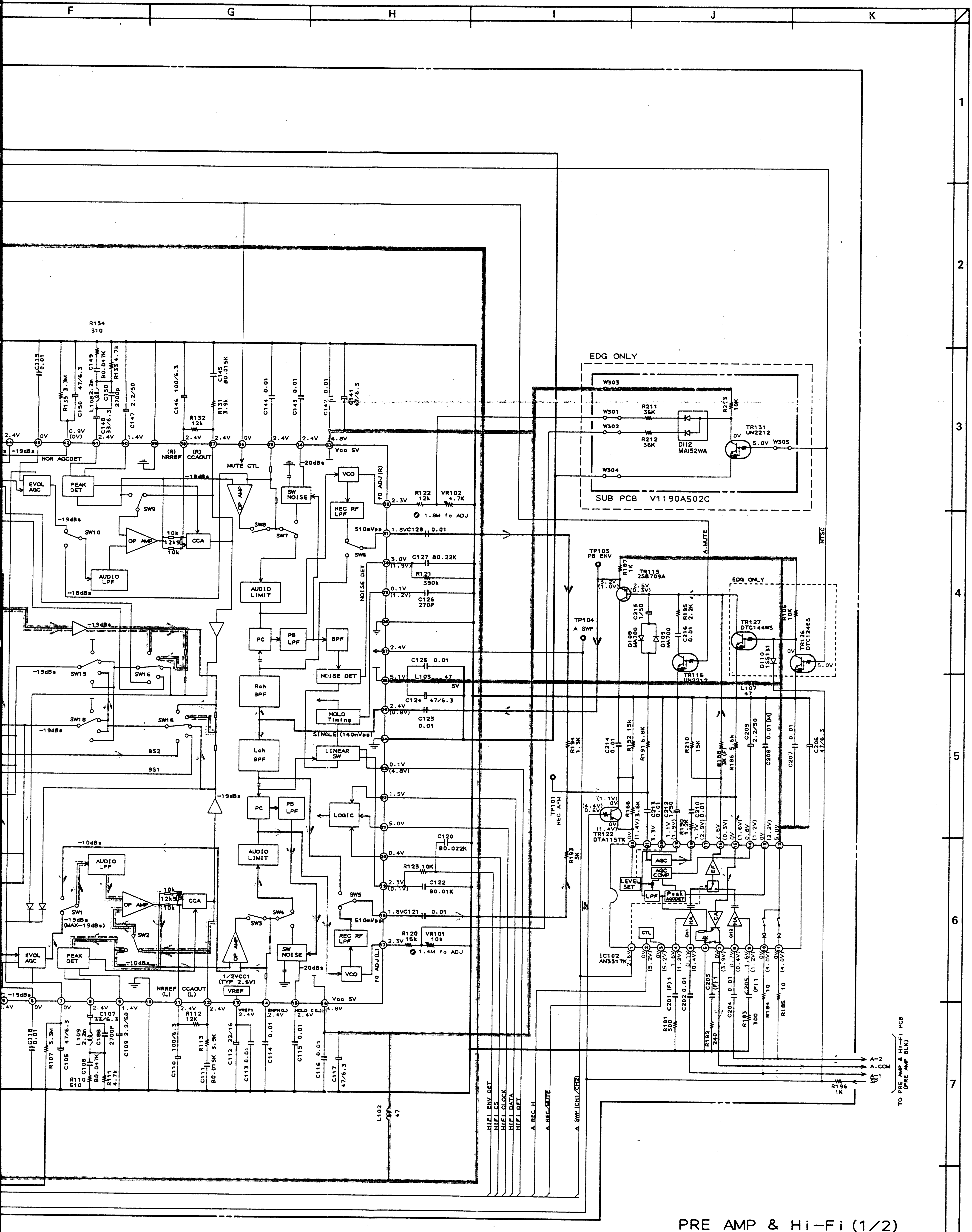
TRANSISTORs

TR1	E6
TR2	E6
TR3	E6
TR6	B6
TR7	A6
TR8	A6
TR9	D5,6
TR10	D6
TR11	D6
TR12	D5
TR13	D5
TR14	D6
TR15	D5
TR16	D6
TR17	C6
TR18	C6
TR19	D6
TR20	D5
TR21	B6
TR201	A3
TR203	A5
TR205	A5
TR206	A5
TR207	A5
TR209	A5
TR210	A6
TR299	A5
TR301	B2
TR302	A2
TR303	B2
TR304	A2
TR401	D2
TR402	B2
TR403	B4
TR404	C,D4
TR405	G3,4
TR406	A3
TR407	B2
TR408	E2
TR409	D4
TR410	B5
TR411	A2
TR412	B2
TR413	B2
TR414	D2
TR601	G5
TR603	G3
TR604	G3
TR608	G4
TR609	F3,4
TR610	G3
TR611	G3
TR612	H3
TR614	H5
TR615	H3
TR616	H4
TR617	H5
TR618	F3
TR619	H6
TR620	H5
TR621	G4
TR622	G6
TR623	G6
TR624	G6
TR625	G6
TR626	G6
TR627	F5
TR628	F5
TR629	F5
TR630	F5
TR631	F5
TR632	F5
TR633	F5
TR634	F3
TR635	F5
TR636	G6
TR637	F5
TR640	H2
TR642	H2
TR643	H2
TR644	H2
TR647	H5
TR648	F5
TR649	E5
TR650	E5
TR651	H5
TR652	G5
TR653	E5
TR654	E5
TR655	F3
TR656	F3
TR657	F3
TR658	F3

SINGLE CHIP TRANSISTOR



OSC PCB
V1190A502B
PRE AMP & Hi-Fi PCB V1190A502A
IC101
AN3963NFBPA
IC103 BA7755A
TR111 2SD601A
TR110 2SD601A
TR109 UN2211
TR117 2SB709A
TR102 UN2213
TR103 UN2113
TR104 UN2215
TR105 UN2215
TR121 UN2212
TR112 UN2211
TR120 UN2212
TR106 UN2215
TR108 UN2213
TR118 2SB709A
TR119 2SB709A
TR101 UN2215
D101 1SS131T-77
D104 MA153/A
D106 1SS131T-77
D11 MA152WK
FL101 6062
L106 2.7m
P272
P172
WP128
P122
P101
P102
P129
P131
TO FE HEAD
A/C HEAD PCB P1
TO MAIN PCB 3/3 P401
TO MAIN PCB 3/3 WF402
TO DRUM MOTOR
TO IN/OUT (C) PCB P337
NTSC
A.MUTE
T.MUTE
JS101
JS130
JS104
JS105
JS103
JS100
EK-N, EGH-N/DN ONLY
INPUT SW
NOR AGC
fH TRAP
EVOL AGC
PEAK DET
NOR AGCDET
AUDIO LPF
OP AMP
NOR PB
NOR REC
NOR PB IN -67dBs
NOR REC OUT -5dBs
N MUTE
N REC
N PB
SW10
SW11
SW12
SW13
SW14
SW17
SW18
SW19
SW1
AMP
DC SHIFT
VOL
VREF
1/2VCC2 (TYP 6V)
Vcc 12V
19dBAMP
-19dBs
-10dBs
-18dBs
5dBs (VOL-MAX)
-3dBs (LOW -7dBs)
-6dBs
-19dBs (MAX -10dBs)
SP
A
B
C
D
E
F
1
2
3
4
5
6
7
8


F
G
H
I
J
K
1
2
3
4
5
6
7
8
EDG ONLY
W303
W301
W302
W304
W305
R211 36K
R212 36K
R213 10K
D112 MA152WA
TR131 UN2212
5.0V
SUB PCB V1190A502C
R134 510
C119 0.01
R135 3.3M
C150 47/6.3
L108 2.2m
C149 80.047K
C130 2700p
R133 4.7k
C148 33/6.3
C147 2.2/50
C146 100/6.3
R132 12k
C145 80.015K
R131 3.9k
C144 0.01
C143 0.01
C142 0.01
C141 47/6.3
NOR AGCDET
(R) NRREF
(R) CCAOUT
MUTE CTL
Vcc 5V
EVOL AGC
PEAK DET
OP AMP
CCA
SW9
SW10
SW8
SW7
SW NOISE
VCO
REC RF LPF
TO ADJ (R)
R122 12k
VR102 4.7K
1.8M to ADJ
510mVpp
1.8V C128 0.01
SW6
AUDIO LPF
AUDIO LIMIT
NOISE DET
3.0V (1.9V) C127 80.22K
R121 390k
0.1V (1.2V) C126 270P
PC
PB LPF
BPF
2.4V
Rch BPF
NOISE DET
C125 0.01
5.1V L103 47
C124 47/6.3
2.4V (0.8V)
C123 0.01
HOLD Timing
SINGLE (140mVpp)
Lch BPF
LINEAR SW
0.1V (4.8V)
1.5V
LOGIC
5.0V
C120 80.022K
0.4V
R123 10K
2.3V (0.1V) C122 80.01K
SW5
1.8V C121 0.01
R120 15k
VR101 10k
1.4M to ADJ
TO ADJ (L)
SW1
SW2
SW3
SW4
SW15
SW16
SW18
SW19
BS1
BS2
-19dBs
-18dBs
-10dBs
-20dBs
-19dBs (MAX-19dBs)
NRREF (L)
CCAOUT (L)
1/2VCC1 (TYP 2.6V)
VREF
VREF1 2.4V
EMPH (L) 2.4V
HOLD C (L) 2.4V
C118 0.01
R107 3.3M
C105 47/6.3
L109 2.2m
C107 33/6.3
C108 80.047K
C106 2700P
C109 2.2/50
R110 510
R111 4.7k
R112 12K
C110 100/6.3
R113 3.9K
C111 80.015K
C112 22/16
C113 0.01
C114 0.01
C115 0.01
C116 0.01
C117 47/6.3
L102 47
HIFI ENV DET
HIFI CS
HIFI CLOCK
HIFI DATA
HIFI DET
A REC H
A REC MUTE
A SWP (CH1/CH2)
TP103 PB ENV
TP104 A SWP
TP101 REC AFM
TR115 2SB709A
R187 1K
C215 1/50
R215 2.2K
C216 0.01
D108 MA700
D109 MA700
TR116 UN2212
A.MUTE
NTSC
EDG ONLY
TR127 DTC144WS
TR126 DTC124ES
R216 10K
D110 1SS131
L107 47
R194 1.3K
R193 3K
SP
C214 0.01
R192 15k
R191 6.8K
R210 15K
R188 3K (F)
R186 5.6k
C209 2.2/50
C208 0.01 (M)
C207 0.01
C206 47/6.3
TR122 DTA115TK
R166 3.6K
C213 0.01
C212 1/50
R190 12K
C210 0.01
AGC
AGC COMP
LEVEL SET
LPF
Peak AGCDET
EF
CTL
CH1
CH2
CA
HA
IC102 AN3317K
C201 (F) 0.01
C202 0.01
C203 (F)
C204 0.01
C205 (F)
R181 300
R182 240
R183 300
R184 10
R185 10
R196 1K
A-2
A.COM
A-1
SP
TO PRE AMP & Hi-Fi PCB (PRE AMP BLK)

- B (POWER SUPPLY) LINE
- NORMAL AUDIO PB SIGNAL LINE
- NORMAL AUDIO REC & E-E SIGNAL LINE
- AUDIO PB SIGNAL LINE
- AUDIO REC & E-E SIGNAL LINE

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN μF
ALL CAPACITORS IN μF/WV ()
ALL INDUCTORS IN μH (K)

INDICATED VOLTAGES WERE
MEASURED DURING PB MODE.
( ) : REC MODE
(TAPE SPEED: SP)

PRE AMP & Hi-Fi (1/2)
(AUDIO BLK)
SCHEMATIC DIAGRAM

No. 19-5 V119005M
A0

PRINCIPAL PARTS LOCATION

ICs

IC1	E1,2
IC101	B,C2
IC102	D1

CONNECTORs

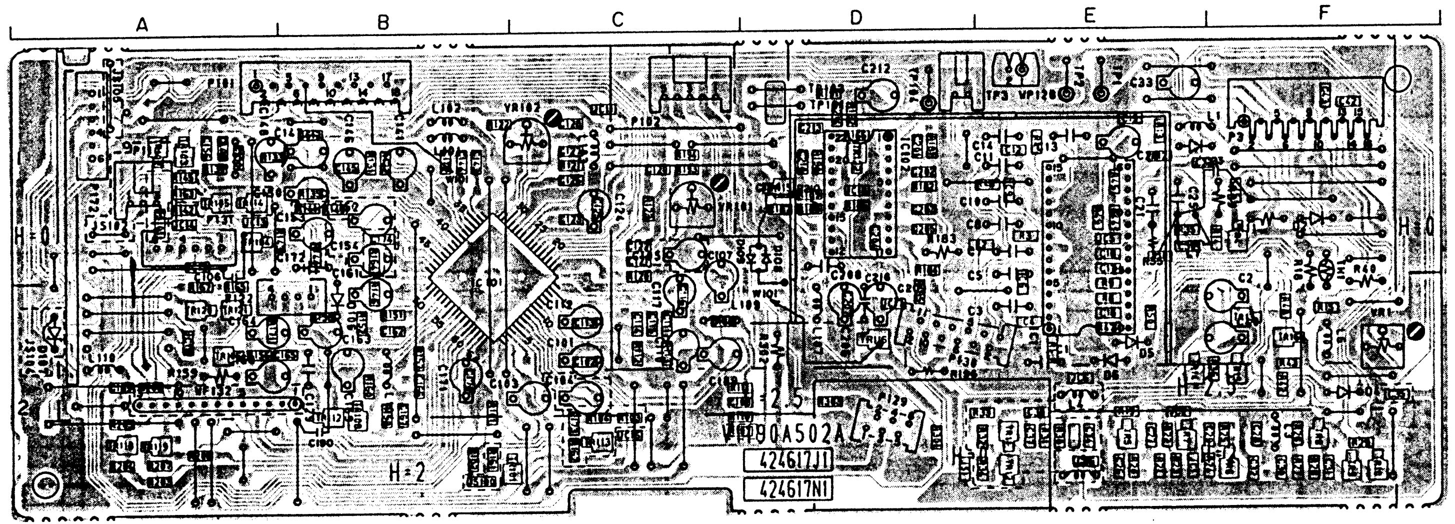
P3	F1
P101	B1
P102	C1
P122	A,B2
P129	D2
P130	D,E2
P131	A1,2
P172	A1

WP

WP128	E1

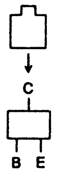
TRANSISTORs

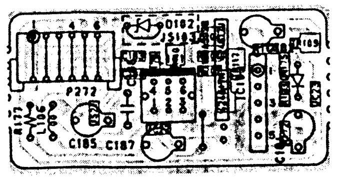
TR4	F1,2
TR5	E2
TR6	F2
TR7	E2
TR8	F1
TR9	F2
TR10	F2
TR13	F2
TR14	E2
TR15	F2
TR16	F2
TR101	B2
TR102	A1
TR103	A1
TR104	A1
TR105	A1
TR106	A2
TR108	B2
TR112	B2
TR115	D1
TR116	D2
TR118	A2
TR119	A2
TR120	A2
TR121	A2
TR122	D1


A
B
C
D
E
F
VI190A502A
424617J1
424617N1
H=2
C212
TP3
WP128
C33
VR102
P272

PRE AMP & HI-FI PCB VI190A502A(JI)
(EXCEPT EDG)

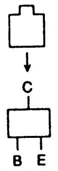
SINGLE CHIP TRANSISTOR

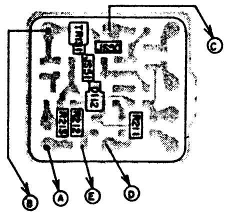



P272
C185
C187
D182

OSC PCB VI190A502BJI
(EXCEPT EDG)

SINGLE CHIP TRANSISTOR





Ⓐ : W303
Ⓑ : W304
Ⓒ : W305
Ⓓ : W301
Ⓔ : W302

SUB PCB VI190A502CJ2
(EDG ONLY)

PRINCIPAL PARTS LOCATION

ICs

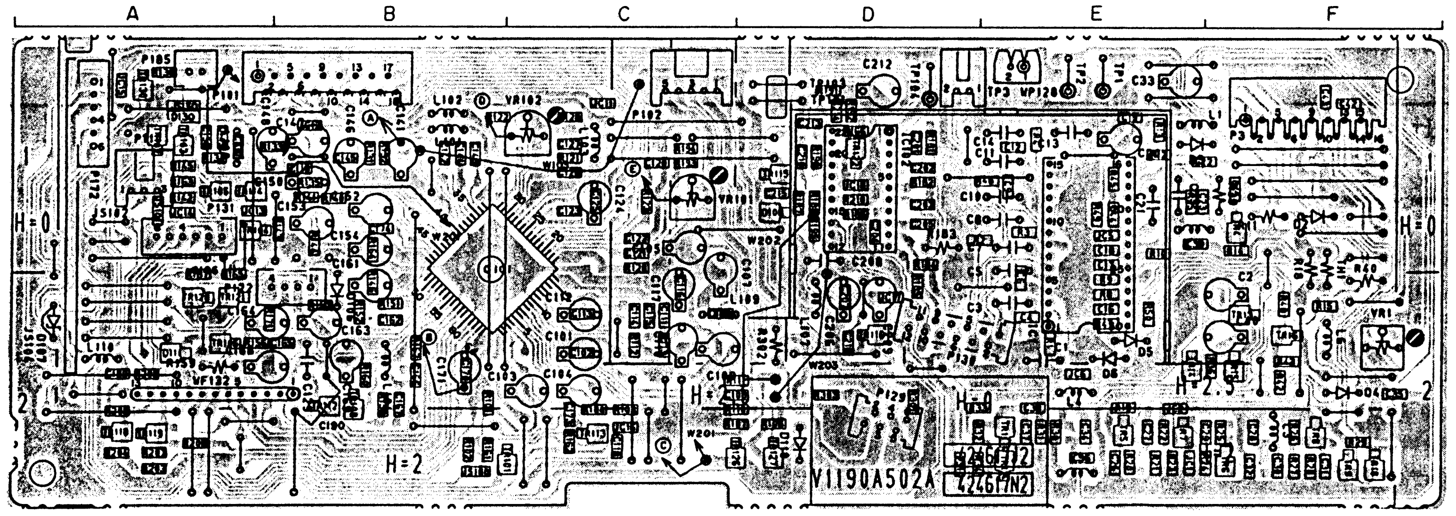
IC1	E1,2
IC101	B,C1,2
IC102	D1

CONNECTORs

P3	F1
P101	B1
P102	C1
P122	A.B2
P129	D2
P130	D,E2
P131	A1,2
P172	A1
WF132	A2

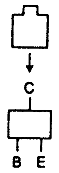
TRANSISTORs

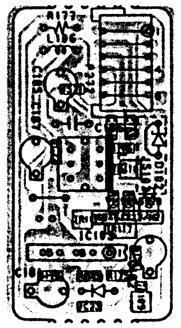
TR4	F1,2
TR5	E2
TR6	F2
TR7	E2
TR8	F1
TR9	F2
TR10	F2
TR13	F2
TR14	E2
TR15	F2
TR16	F2
TR101	B2
TR102	A1
TR103	A1
TR104	A1
TR105	A1
TR106	A2
TR108	B2
TR112	B2
TR115	D1
TR116	D2
TR118	A2
TR119	A2
TR120	A2
TR121	A2
TR122	D1
TR126	C,D2
TR127	D2


A
B
C
D
E
F
VI190A502A
424617J2
424617N2
H=2
C212
TP3
WP128
C33
VR102
P185
P101
P131
L102
C190

PRE AMP & HI-Fi PCB VI190A502AJ2(EDG ONLY)

SINGLE CHIP TRANSISTOR

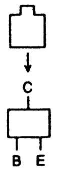


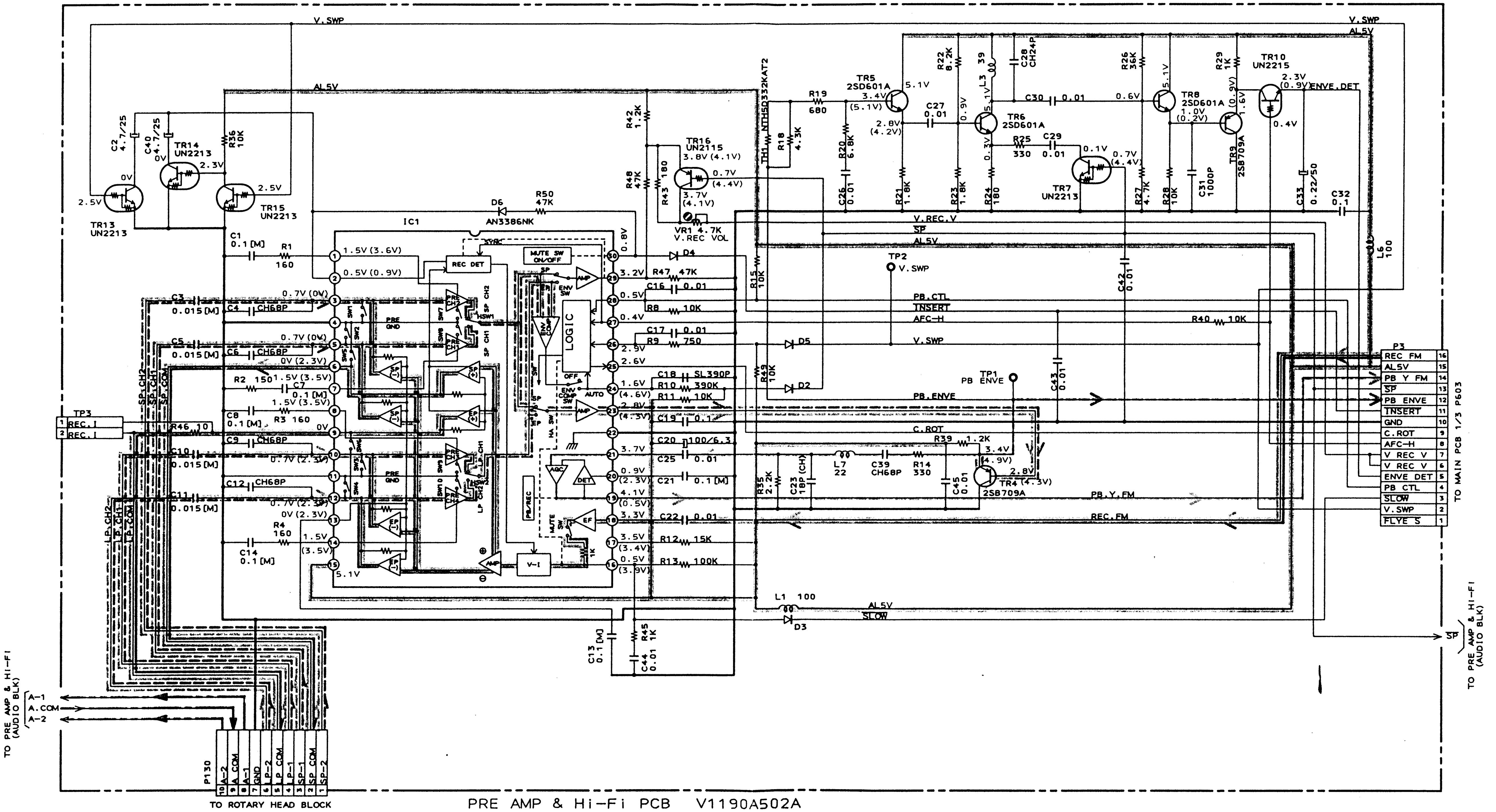


OSC PCB VI190A502BJ2
(EDG ONLY)

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER. REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.

SINGLE CHIP TRANSISTOR




V.SWP
AL5V
TR13 UN2213
TR14 UN2213
TR15 UN2213
TR16 UN2115
TR5 2SD601A
TR6 2SD601A
TR7 UN2213
TR8 2SD601A
TR9 2SB709A
TR10 UN2215
TR4 2SB709A
IC1 AN3386NK
VR1 4.7K V.REC VOL
TH1 NTH5D332KAT2
REC DET
MUTE SW ON/OFF
LOGIC
AMP
AGC
DET
EF
V-I
PB/REC
TP1 PB ENVE
TP2 V.SWP
TP3
REC.I
V.REC.V
SP
PB.CTL
INSERT
AFC-H
PB.ENVE
C.ROT
PB.Y.FM
REC.FM
SLOW
ENVE.DET
P3
REC FM
AL5V
PB Y FM
SP
PB ENVE
INSERT
GND
C.ROT
AFC-H
V REC V
V REC V
ENVE DET
PB CTL
SLOW
V.SWP
FLYE S
TO MAIN PCB 1/3 P603
TO PRE AMP & Hi-Fi (AUDIO BLK)
A-1
A.COM
A-2
SP.CH2
SP.CH1
SP.COM
LP.CH2
LP.CH1
LP.COM
P130
A-2
A.COM
A-1
GND
LP-2
LP.COM
LP-1
SP-1
SP.COM
SP-2
TO ROTARY HEAD BLOCK
L1 100
L6 100
L7 22
D2
D3
D4
D5
D6

PRE AMP & Hi-Fi PCB V1190A502A

- B (POWER SUPPLY) LINE
- PB Y SIGNAL LINE
- REC Y SIGNAL LINE
- PB CHROMA SIGNAL LINE
- REC CHROMA SIGNAL LINE
- PB AUDIO SIGNAL LINE
- REC AUDIO SIGNAL LINE

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN µF
ALL INDUCTORS IN µH (K)
ALL DIODES ARE 1SS131T-77

INDICATED VOLTAGES WERE
MEASURED DURING PB MODE.
(TAPE SPEED: SP)
( ) : REC MODE

PRE AMP & Hi-Fi (2/2)
(PRE AMP BLK)
SCHEMATIC DIAGRAM

No.19-6 V119006M
A2

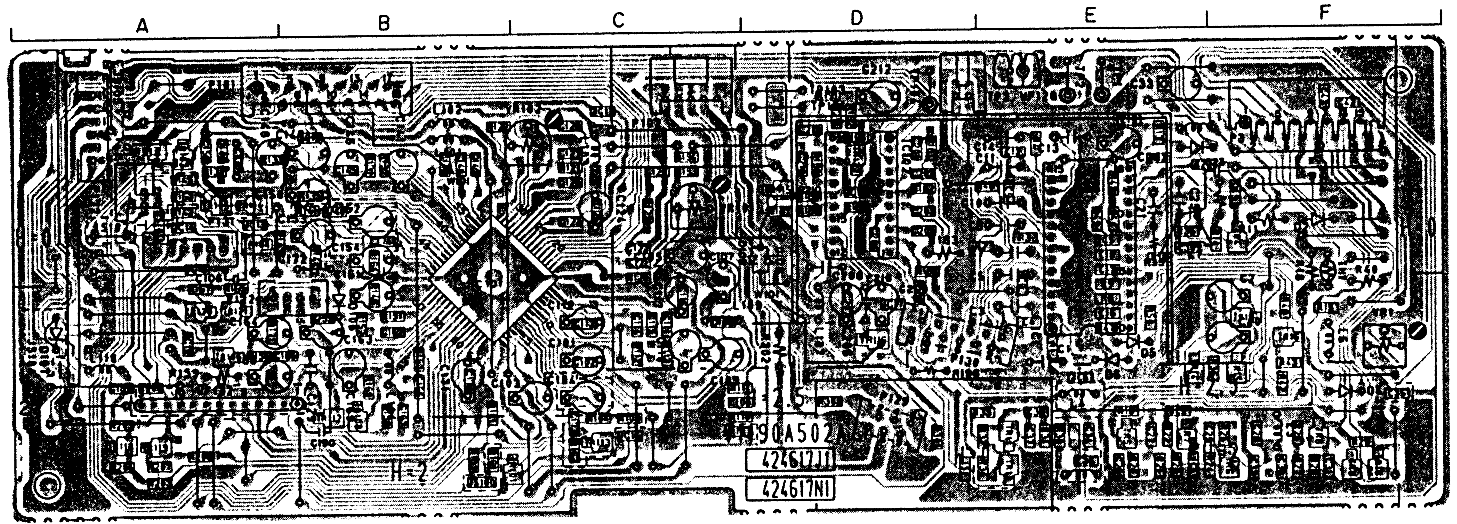
PRINCIPAL PARTS LOCATION

ICs	
IC1	E1,2
IC101	B,C2
IC102	D1

CONNECTORs	
P3	F1
P101	B1
P102	C1
P122	A,B2
P129	D2
P130	D,E2
P131	A1,2
P172	A1

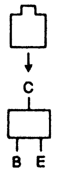
WP	
WP128	E1

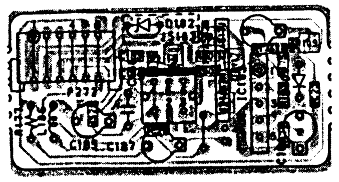
TRANSISTORs	
TR4	F1,2
TR5	E2
TR6	F2
TR7	E2
TR8	F1
TR9	F2
TR10	F2
TR13	F2
TR14	E2
TR15	F2
TR16	F2
TR101	B2
TR102	A1
TR103	A1
TR104	A1
TR105	A1
TR106	A2
TR108	B2
TR112	B2
TR115	D1
TR116	D2
TR118	A2
TR119	A2
TR120	A2
TR121	A2
TR122	D1



PRE AMP & HI-FI PCB V1190A502A(J1)
(EXCEPT EDG)

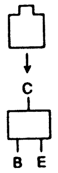
SINGLE CHIP TRANSISTOR

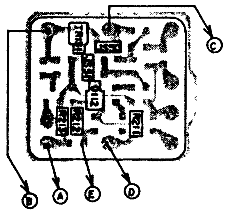




OSC PCB V1190A502BJ1
(EXCEPT EDG)

SINGLE CHIP TRANSISTOR





SUB PCB V1190A502CJ2
(EDG ONLY)

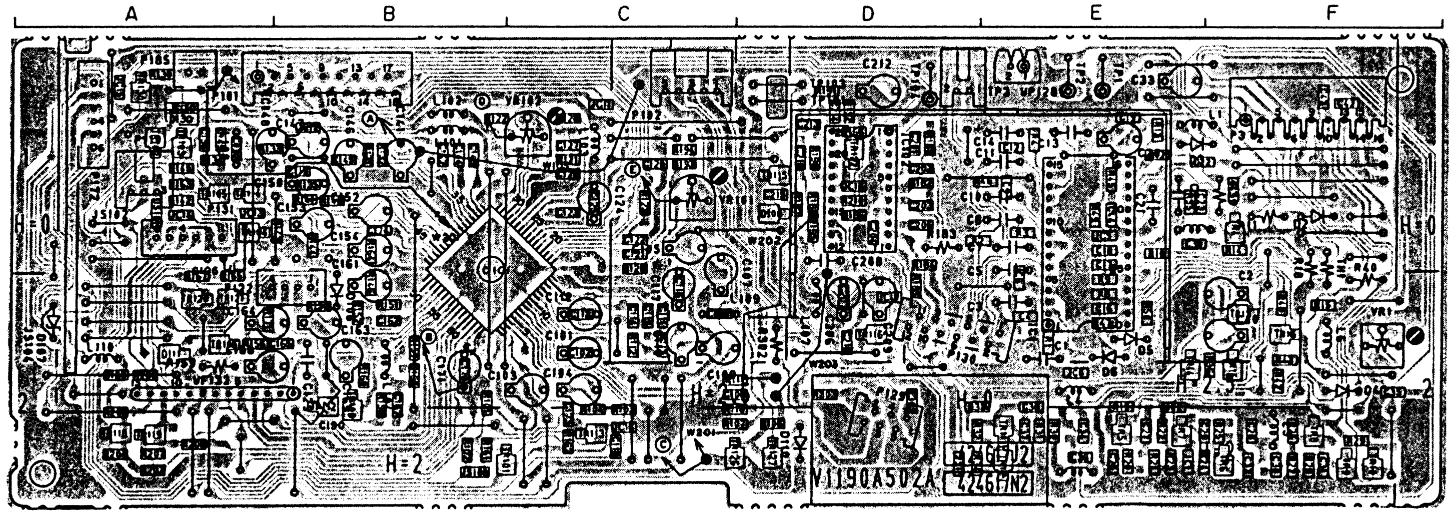
Ⓐ : W303
Ⓑ : W304
Ⓒ : W305
Ⓓ : W301
Ⓔ : W302

PRINCIPAL PARTS LOCATION

ICs	
IC1	E1,2
IC101	B,C1,2
IC102	D1

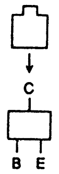
CONNECTORs	
P3	F1
P101	B1
P102	C1
P122	A,B2
P129	D2
P130	D,E2
P131	A1,2
P172	A1
WF132	A2

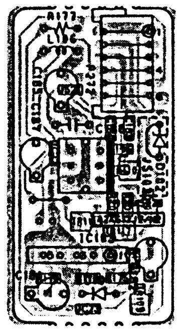
TRANSISTORs	
TR4	F1,2
TR5	E2
TR6	F2
TR7	E2
TR8	F1
TR9	F2
TR10	F2
TR13	F2
TR14	E2
TR15	F2
TR16	F2
TR101	B2
TR102	A1
TR103	A1
TR104	A1
TR105	A1
TR106	A2
TR108	B2
TR112	B2
TR115	D1
TR116	D2
TR118	A2
TR119	A2
TR120	A2
TR121	A2
TR122	D1
TR126	C,D2
TR127	D2



PRE AMP & HI-FI PCB V1190A502AJ2(EDG ONLY)

SINGLE CHIP TRANSISTOR

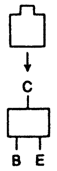


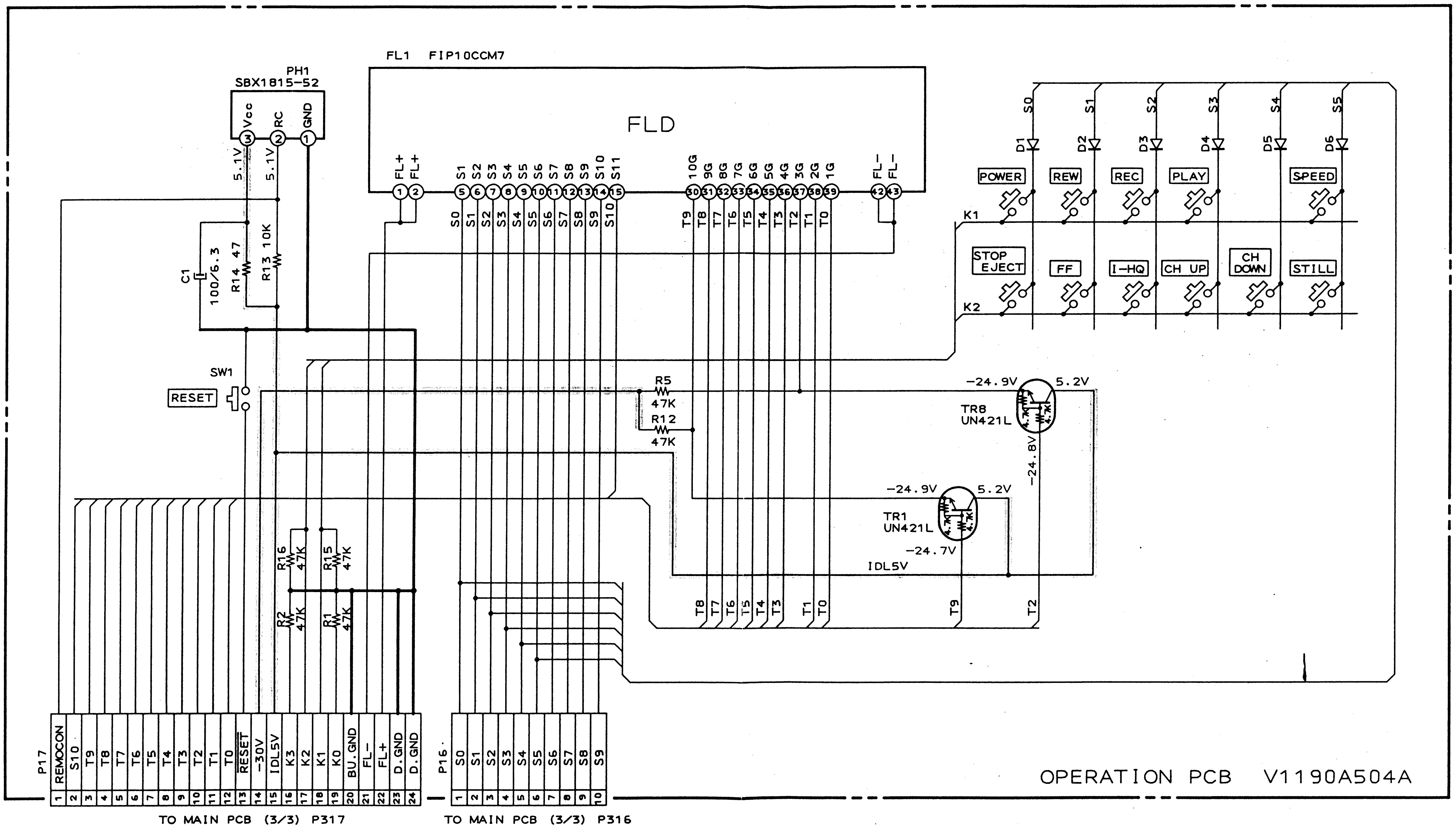


OSC PCB V1190A502BJ2
(EDG ONLY)

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER. REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.

SINGLE CHIP TRANSISTOR



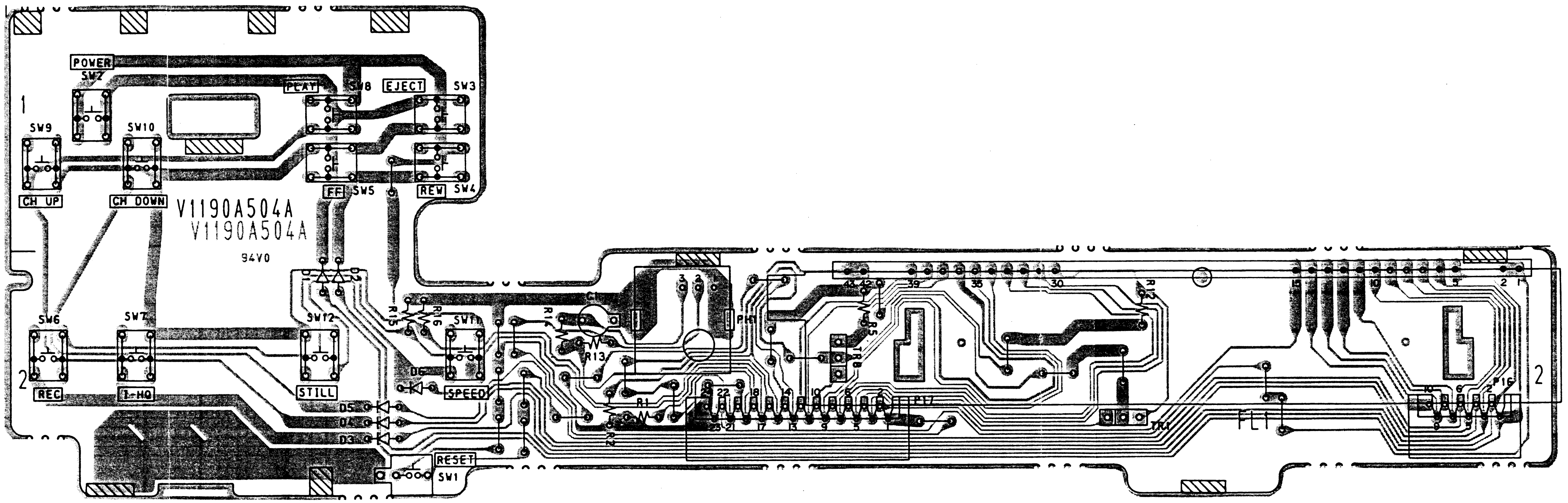

FL1 FIP10CCM7
FLD
PH1
SBX1815-52
Vcc
RC
GND
5.1V
5.1V
C1
100/6.3
R14 47
R13 10K
SW1
RESET
FL+
FL+
S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11
S0 S1 S2 S3 S4 S5 S6 S7 S8 S9 S10
10G 9G 8G 7G 6G 5G 4G 3G 2G 1G
T9 T8 T7 T6 T5 T4 T3 T2 T1 T0
FL-
FL-
S0 S1 S2 S3 S4 S5
D1 D2 D3 D4 D5 D6
POWER
REW
REC
PLAY
SPEED
K1
STOP EJECT
FF
I-HQ
CH UP
CH DOWN
STILL
K2
R5
47K
R12
47K
-24.9V
5.2V
TR8
UN421L
-24.8V
-24.9V
5.2V
TR1
UN421L
-24.7V
IDL5V
R16 47K
R15 47K
R2 47K
R1 47K
T8 T7 T6 T5 T4 T3 T1 T0
T9
T2
P17
REMOCON
S10
T9
T8
T7
T6
T5
T4
T3
T2
T1
T0
RESET
-30V
IDL5V
K3
K2
K1
K0
BU.GND
FL-
FL+
D.GND
D.GND
P16
S0 S1 S2 S3 S4 S5 S6 S7 S8 S9
TO MAIN PCB (3/3) P317
TO MAIN PCB (3/3) P316
OPERATION PCB V1190A504A

NOTE:
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/10W OR 1/4W (J)
ALL CAPACITORS IN μF (P=PF) (J)
ALL ELECTROLYTIC CAPACITORS IN μF/WV (M)
[D] IS ELECTRIC DOUBLE LAYER CAPACITOR
ALL DIODES ARE 1SS131

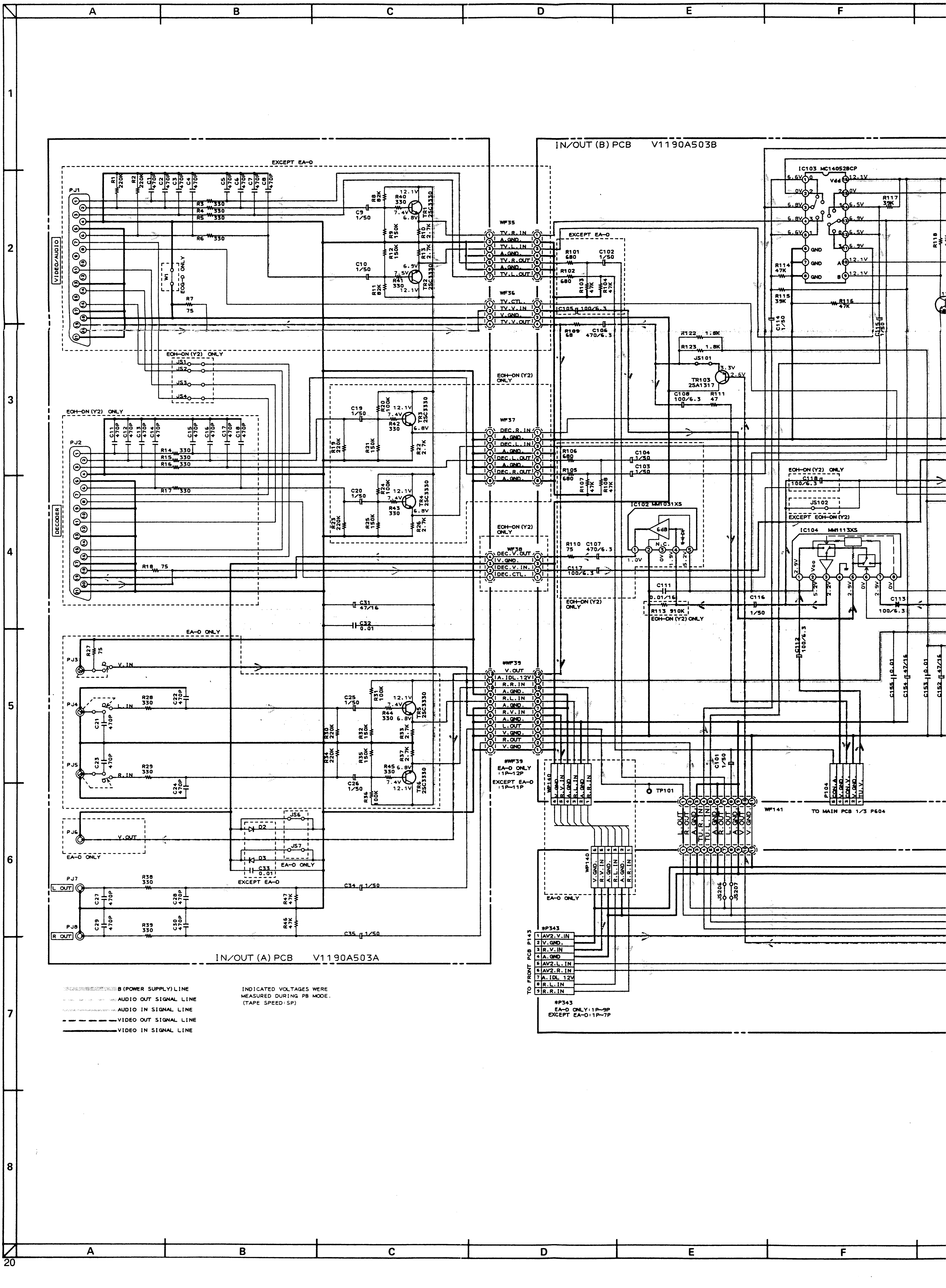
▬ B (POWER SUPPLY) LINE

INDICATED VOLTAGES WERE
MEASURED DURING PB MODE.
(TAPE SPEED:SP)

OPERATION
SCHEMATIC DIAGRAM
No.19-7 V119007M
A3

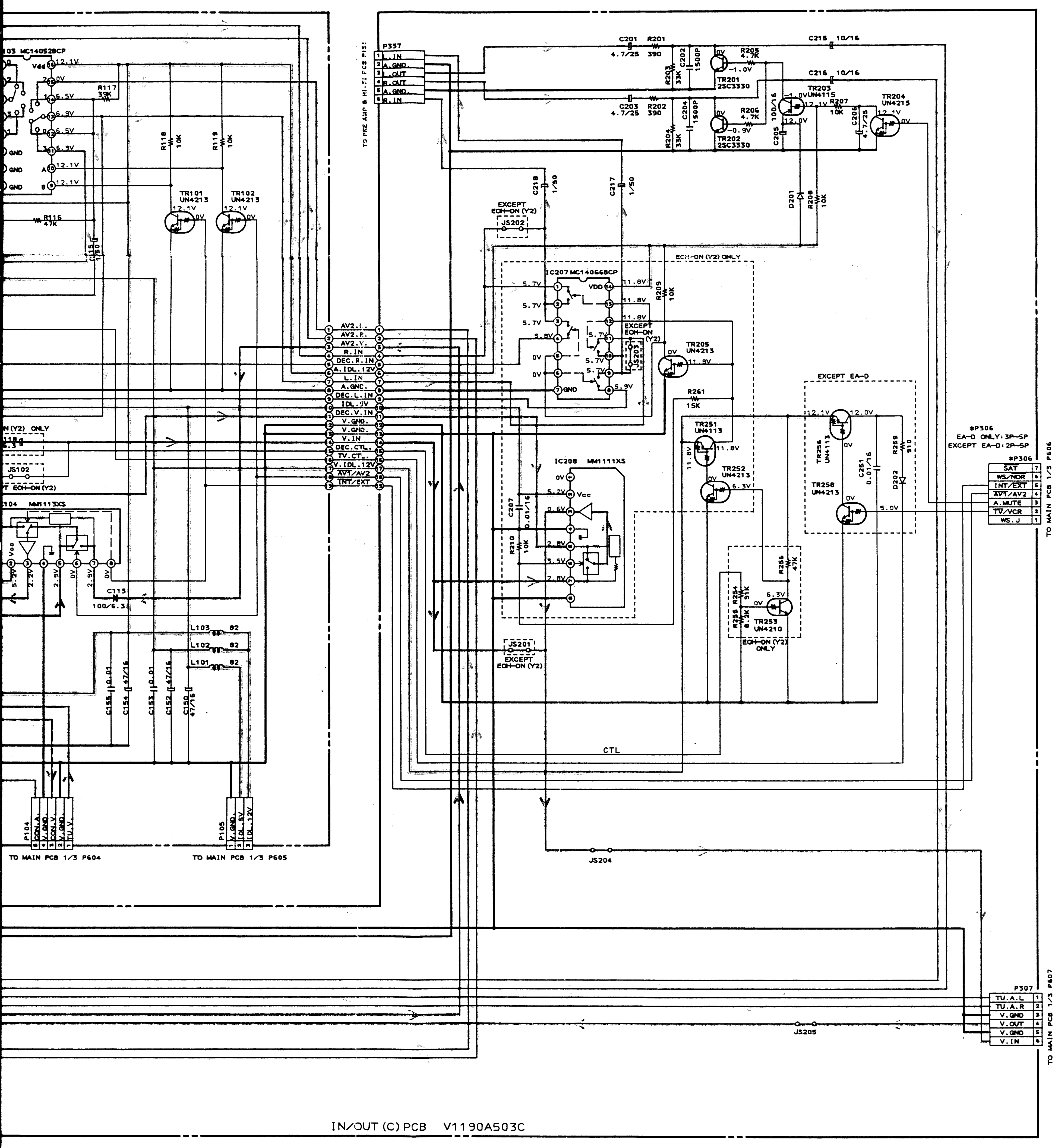

POWER
SW2
PLAY
SW8
EJECT
SW3
1
SW9
SW10
CH UP
CH DOWN
V1190A504A
V1190A504A
94V0
FF
SW5
REW
SW4
SW6
SW7
SW12
SW11
R15
R16
R14
C1
R13
PH1
TR8
R5
D6
SPEED
2
REC
1-HQ
STILL
D5
D4
D3
RESET
SW1
R1
R2
P17
TR1
FL1
P16
2

OPERATION PCB V1190A504A


IN/OUT (A) PCB V1190A503A
IN/OUT (B) PCB V1190A503B
EXCEPT EA-D
PJ1
VIDEO/AUDIO
EOG-D ONLY
EOH-ON (Y2) ONLY
PJ2
DECODER
EA-D ONLY
PJ3 V.IN
PJ4 L.IN
PJ5 R.IN
PJ6 V.OUT
PJ7 L OUT
PJ8 R OUT
TR1 2SC3330
TR2 2SC3330
TR3 2SC3330
TR4 2SC3330
TR5 2SC3330
TR6 2SC3330
WF35
TV.R.IN
A.GND.
TV.L.IN
TV.R.OUT
TV.L.OUT
WF36
TV.CTL.
TV.V.IN
V.GND.
TV.V.OUT
WF37
DEC.R.IN
DEC.L.IN
DEC.L.OUT
DEC.R.OUT
WF38
DEC.V.OUT
DEC.V.IN
DEC.CTL.
*WF39
V.OUT
A.IDL.12V
R.R.IN
R.L.IN
R.V.IN
L.OUT
R.OUT
*WF39 EA-D ONLY :1P~12P EXCEPT EA-D :1P~11P
IC103 MC14052BCP
IC102 MM1031XS
IC104 MM1113XS
TR103 2SA1317
JS101
JS102
EXCEPT EOH-ON (Y2)
EOH-ON (Y2) ONLY
TP101
WP140
WF141
P104
CON.A
V.GND
CON.V
TU.V.
TO MAIN PCB 1/3 P604
R.OUT
R.GND.
TU.L.IN
TU.R.IN
A.GND.
L.OUT
V.GND.
JS206
JS207
*P343
AV2.V.IN
V.GND.
R.V.IN
A.GND
AV2.L.IN
AV2.R.IN
A.IDL 12V
R.L.IN
R.R.IN
TO FRONT PCB P143
*P343 EA-D ONLY:1P~9P EXCEPT EA-D:1P~7P

B (POWER SUPPLY) LINE
AUDIO OUT SIGNAL LINE
AUDIO IN SIGNAL LINE
VIDEO OUT SIGNAL LINE
VIDEO IN SIGNAL LINE

INDICATED VOLTAGES WERE MEASURED DURING PB MODE. (TAPE SPEED:SP)


P337
L.IN
A.GND.
L.OUT
R.OUT
A.GND.
R.IN
TO PRE AMP & HI-FI PCB P131
C201 4.7/25
R201 390
C202 1500P
R203 33K
R205 4.7K
TR201 2SC3330
C215 10/16
C216 10/16
TR203 UN4115
C203 4.7/25
R202 390
C204 1500P
R204 33K
R206 4.7K
TR202 2SC3330
C205 100/16
R207 10K
C206 4.7/25
TR204 UN4215
C218 1/50
C217 1/50
EXCEPT EOH-ON (Y2)
JS202
D201
R208 10K
EOH-ON (Y2) ONLY
IC207 MC140668CP
VDD
R209 10K
EXCEPT EOH-ON (Y2)
JS203
TR205 UN4213
R261 15K
EXCEPT EA-D
TR251 UN4113
TR252 UN4213
TR256 UN4113
C251 0.01/16
R259 910
D202
TR258 UN4213
*P306
EA-D ONLY: 3P~5P
EXCEPT EA-D: 2P~5P
SAT
WS/NOR
INT/EXT
AVT/AV2
A.MUTE
TV/VCR
WS.J
TO MAIN PCB 1/3 P606
IC208 MM1111XS
Vcc
C207 0.01/16
R210 10K
R256 47K
R254 91K
R255 8.2K
TR253 UN4210
EOH-ON (Y2) ONLY
JS201
EXCEPT EOH-ON (Y2)
AV2.L.
AV2.R.
AV2.V.
R.IN
DEC.R.IN
A.IDL.12V
L.IN
A.GND.
DEC.L.IN
IDL.5V
DEC.V.IN
V.GND.
V.GND.
V.IN
DEC.CTL.
TV.CT.
V.IDL.12V
AVT/AV2
INT/EXT
IC103 MC140528CP
Vdd
R117 39K
R118 10K
R119 10K
TR101 UN4213
TR102 UN4213
R116 47K
C115 1/50
EOH-ON (Y2) ONLY
JS102
EXCEPT EOH-ON (Y2)
IC104 MM1113XS
C113 100/6.3
L103 82
L102 82
L101 82
C155 0.01
C154 47/16
C153 0.01
C152 47/16
C150 47/16
P104
CON.A.
V.GND
CON.V.
V.GND
TU.V.
TO MAIN PCB 1/3 P604
P105
V.GND
IDL.5V
IDL.12V
TO MAIN PCB 1/3 P605
CTL
JS204
P307
TU.A.L
TU.A.R
V.GND
V.OUT
V.GND
V.IN
TO MAIN PCB 1/3 P607
JS205
IN/OUT (C) PCB V1190A503C

NOTE:
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN μF (P=PF)
ALL ELECTROLYTIC CAPACITORS IN μF/WV
ALL DIODES ARE 1SS131

IN/OUT
SCHEMATIC DIAGRAM

No.19-8 V119008M
A0

PRINCIPAL PARTS LOCATION

ICs

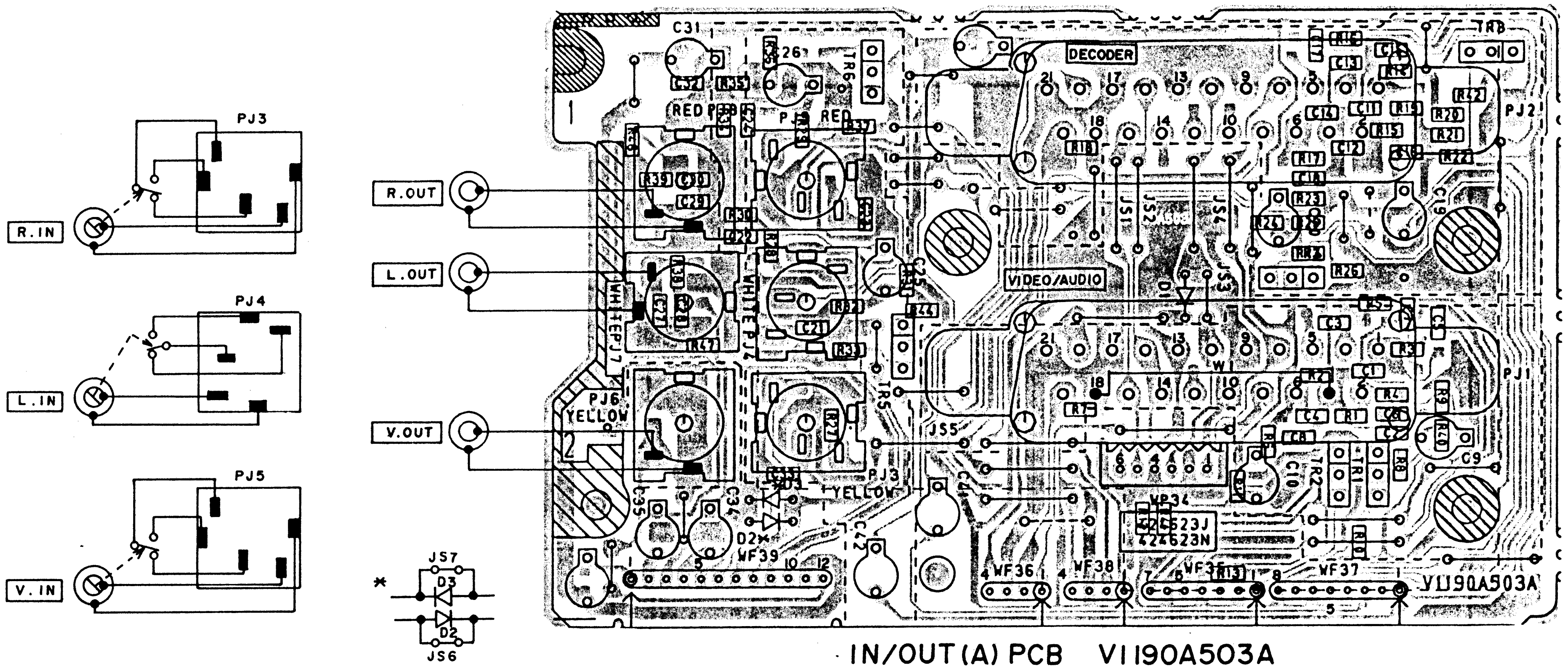
IC102	B2
IC103	B1
IC104	A2
IC207	C1
IC208	C1

CONNECTORs

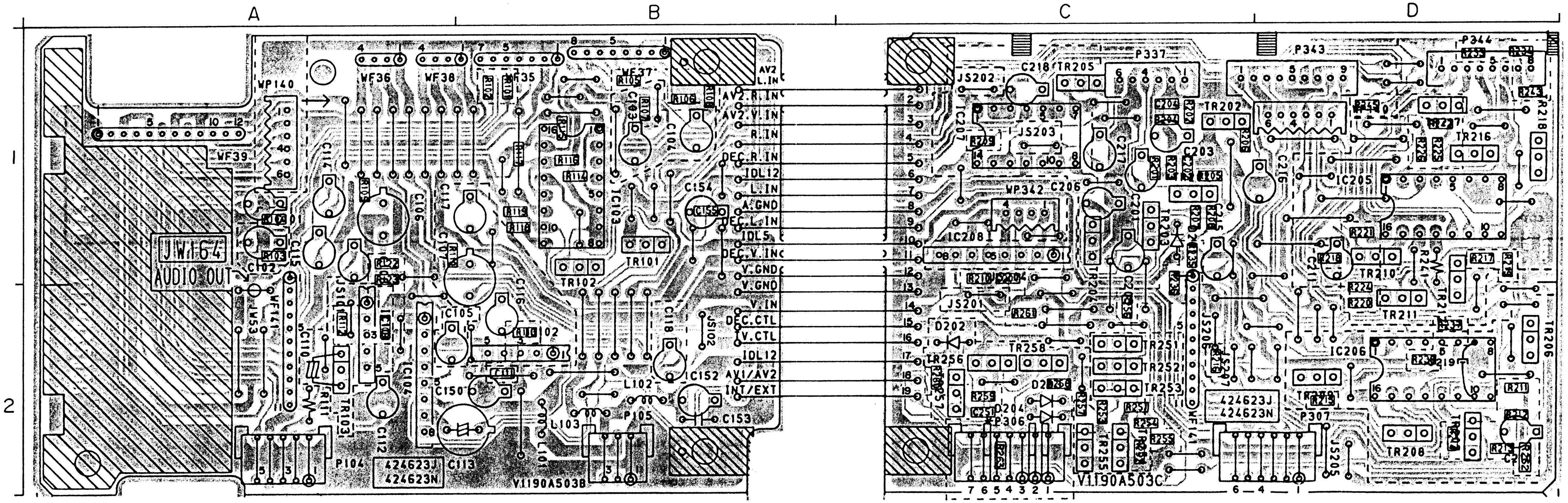
P104	A2
P105	B2
P306	C2
P307	C,D2
P337	C1
P343	D1
WF141	C2
WP140	A1

TRANSISTORs

TR101	B1
TR102	B1
TR103	A2
TR201	C1
TR202	C1
TR203	C1
TR204	C1
TR205	C1
TR251	C2
TR252	C2
TR253	C2
TR256	C2
TR258	C2


PJ3
R.IN
PJ4
L.IN
PJ5
V.IN
R.OUT
L.OUT
V.OUT
JS7
D3
D2
JS6
*
DECODER
VIDEO/AUDIO
PJ1
PJ2
RED
PJ6 YELLOW
PJ7 WHITE
PJ3 YELLOW
WF36
WF38
WF37
WF39
V1190A503A

IN/OUT(A) PCB V1190A503A

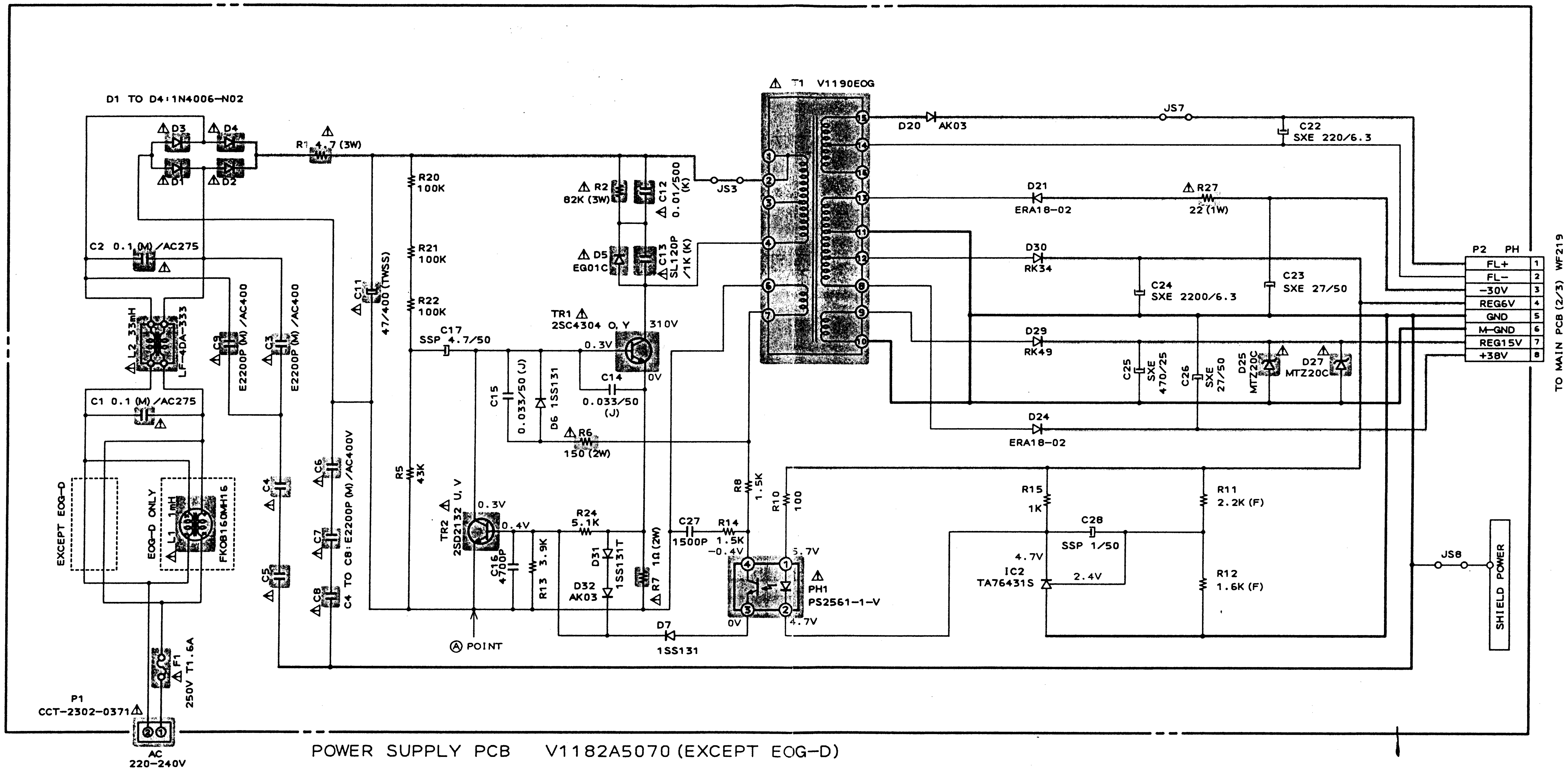

A
B
C
D
1
2
WP140
WF39
WF36
WF38
WF37
JW164
AUDIO OUT
AV2.L.IN
AV2.R.IN
AV2.V.IN
R.IN
DEC.R.IN
IDL12
L.IN
A.GND
DEC.L.IN
IDL5
DEC.V.IN
V.GND
V.GND
V.IN
DEC.CTL
V.CTL
IDL12
AV1/AV2
INT/EXT
P104
P105
424623J
424623N
V1190A503B
P337
P343
P344
P306
P307
JS202
JS203
JS201
WP342
IC205
IC206
IC207
IC208
V1190A503C
7 6 5 4 3 2 1
6 — 4 — 1

IN/OUT(B) PCB V1190A503B

P306 3P~5P (EA-D ONLY)
2P~5P (EXCEPT EA-D)

IN/OUT(C) PCB V1190A503C

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER. REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.


D1 TO D4:1N4006-N02
D3
D4
D1
D2
R1 4.7 (3W)
R20 100K
R21 100K
R22 100K
R2 82K (3W)
C12 0.01/500 (K)
JS3
T1 V1190EOG
D20 AK03
JS7
C22 SXE 220/6.3
D21 ERA18-02
R27 22 (1W)
D30 RK34
C24 SXE 2200/6.3
C23 SXE 27/50
P2 PH
FL+
FL-
-30V
REG6V
GND
M-GND
REG15V
+38V
TO MAIN PCB (2/3) WF219
C2 0.1 (M)/AC275
D5 EG01C
C13 SL120P /1K (K)
C11 47/400 (TWSS)
TR1 2SC4304 O, Y
310V
L2 33mH LF-4DA-333
C9 E2200P (M)/AC400
C3 E2200P (M)/AC400
C17 SSP 4.7/50
0.3V
C14 0.033/50 (J)
0V
D29 RK49
C25 SXE 470/25
C26 SXE 27/50
D25 MTZ20C
D27 MTZ20C
C1 0.1 (M)/AC275
C15 0.033/50 (J)
D6 1SS131
R6 150 (2W)
D24 ERA18-02
EXCEPT EOG-D
EOG-D ONLY
L1 1mH
FK08160MH16
C4
C5
C6
C7
C8
C4 TO C8: E2200P (M)/AC400V
R5 43K
TR2 2SD2132 U, V
0.3V
0.4V
R24 5.1K
C16 4700P
R13 3.9K
D31 1SS131T
D32 AK03
R7 1Ω (2W)
R8 1.5K
R10 100
C27 1500P
R14 1.5K
-0.4V
5.7V
PH1 PS2561-1-V
0V
4.7V
R15 1K
C28 SSP 1/50
4.7V
IC2 TA76431S
2.4V
R11 2.2K (F)
R12 1.6K (F)
JS8
SHIELD POWER
D7 1SS131
Ⓐ POINT
F1 250V T1.6A
P1 CCT-2302-0371
AC 220-240V

POWER SUPPLY PCB V1182A5070 (EXCEPT EOG-D)

POWER SUPPLY PCB V1182A5030 (EOG-D ONLY)

━━ :B (POWER SUPPLY) LINE

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W (J)
ALL CAPACITORS IN μF (P-PF) 16WV (M)
ALL ELECTROLYTIC CAPACITORS IN μF/WV (M)

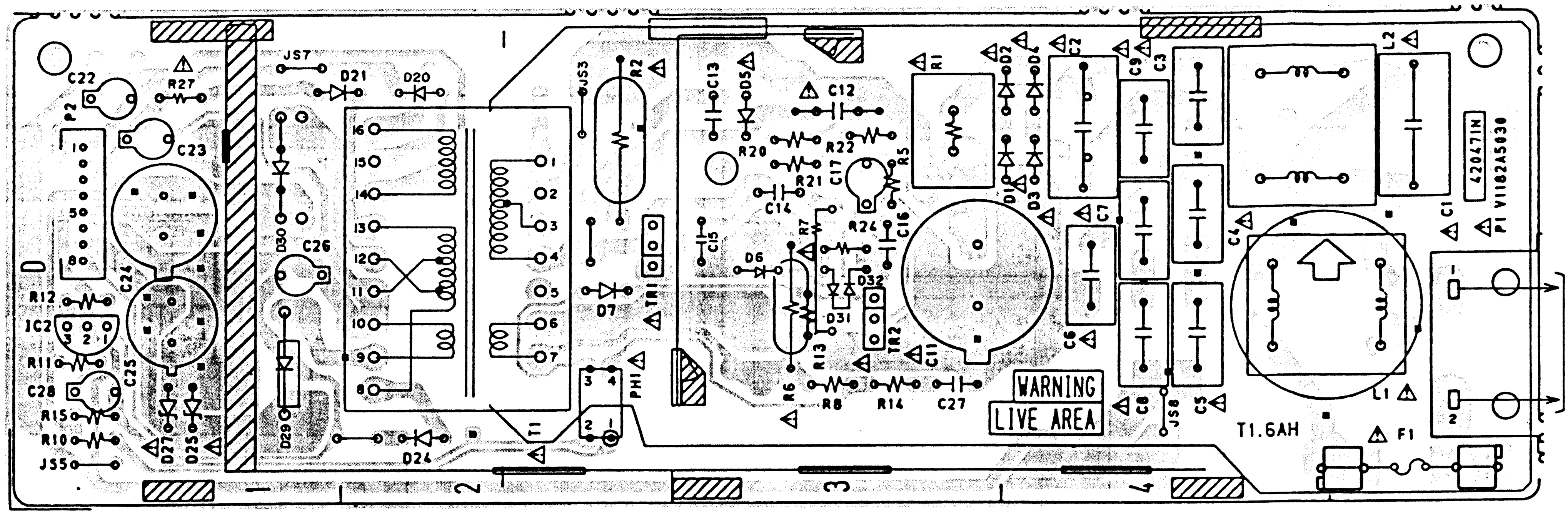
*INDICATED VOLTAGES WERE MEASURED DURING E-E MODE.
THE DC VOLTMETER'S NEGATIVE INPUT WAS CONNECTED
TO THE Ⓐ POINT WHEN THE PRIMARY SECTION WAS MEASURED.
*THE PRIMARY INPUT WAS AC 220V.

WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

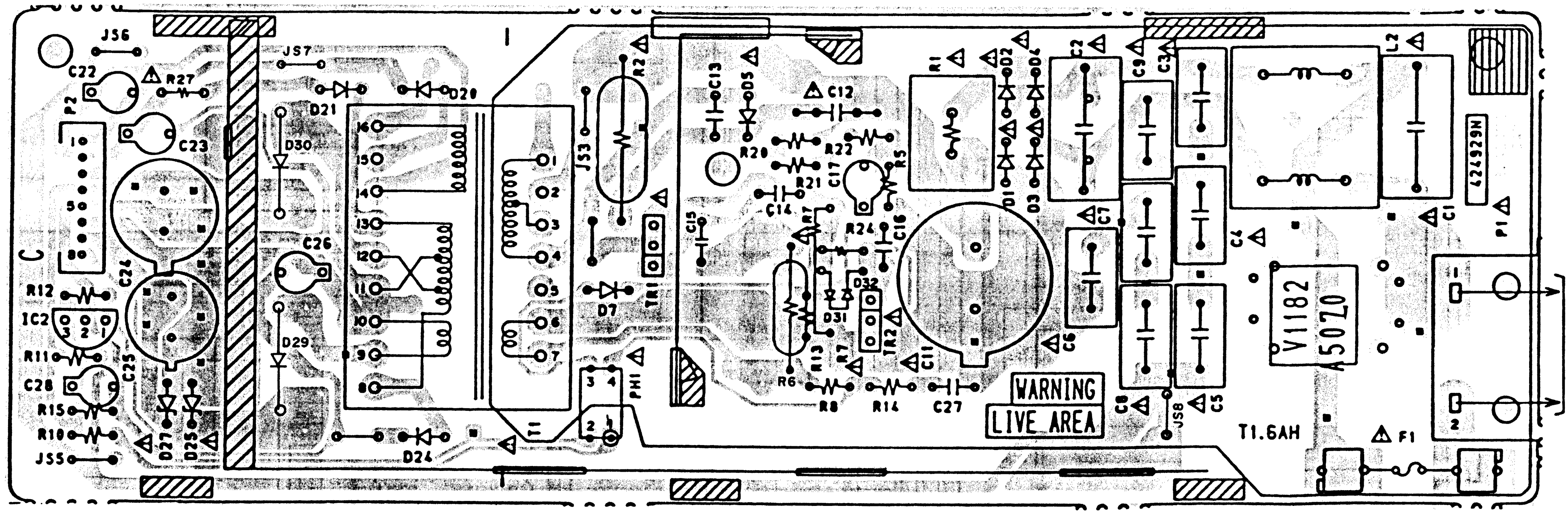
AVERTISSMENT: ⚠ ET ▨, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

POWER SUPPLY
SCHEMATIC DIAGRAM

No.19-9 V119009M
A3


WARNING
LIVE AREA
TO AC PLUG
T1.6AH
F1
L1
L2
T1
PH1
P1 V1182A5030
42047IN
D
JS7
JS3
JS5
JS8
IC2
P2

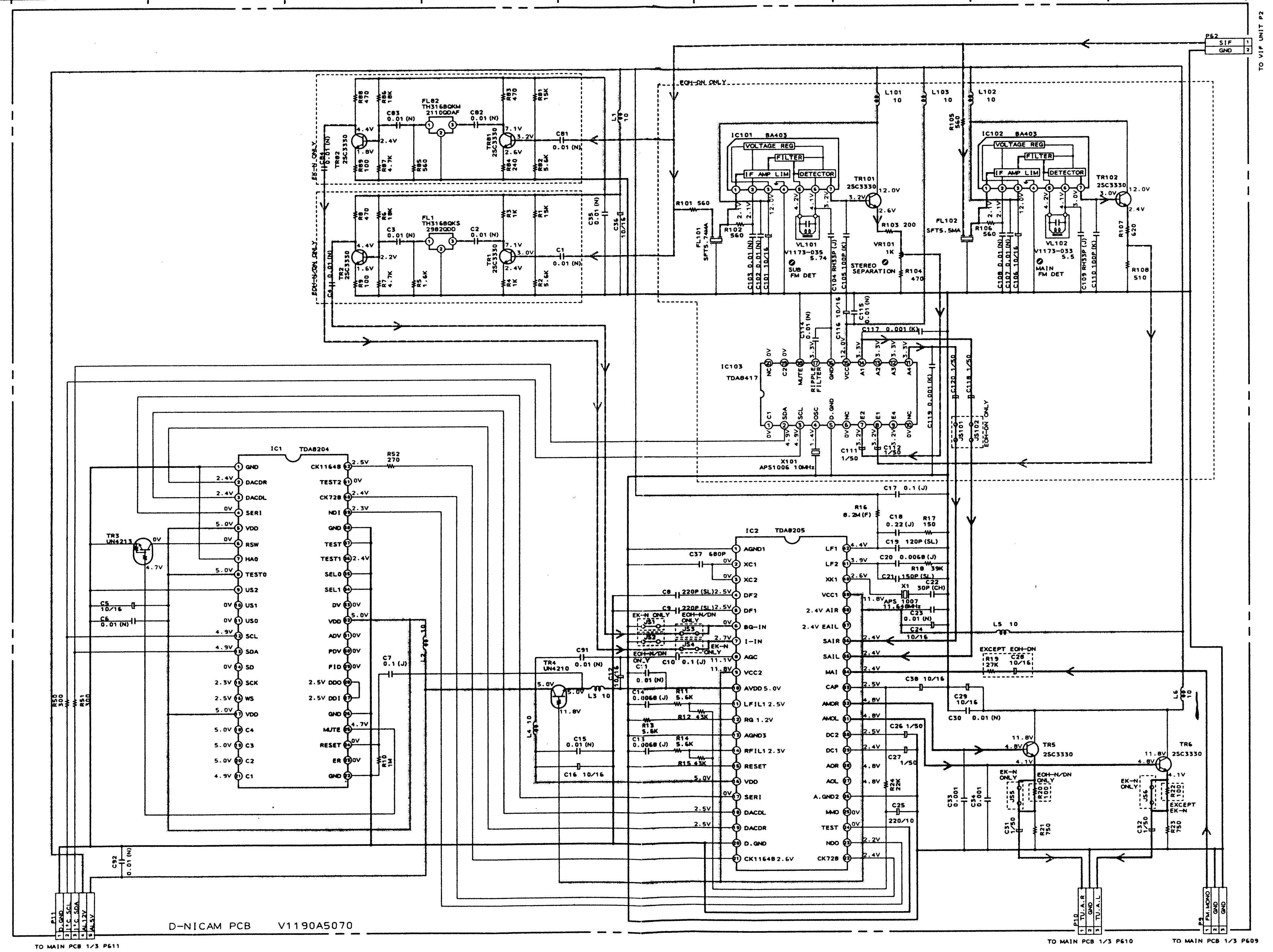
POWER SUPPLY PCB V1182A5030(EOG-D ONLY)


WARNING
LIVE AREA
TO AC PLUG
T1.6AH
F1
L2
T1
PH1
P1
V1182
A5020
424929N
C
JS6
JS7
JS3
JS5
JS8
IC2
P2

POWER SUPPLY PCB V1182A5070(EXCEPT EOG-D)

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT


IC1 TDA8204
IC2 TDA8205
IC101 BA403
IC102 BA403
IC103 TDA8417
VOLTAGE REG
FILTER
IF AMP LIM
DETECTOR
TR1 2SC3330
TR2 2SC3330
TR3 UN4213
TR4 UN4210
TR5 2SC3330
TR6 2SC3330
TR81 2SC3330
TR82 2SC3330
TR101 2SC3330
TR102 2SC3330
FL1 TH316BQKS 2982QDD
FL82 TH316BQKM 2110QDAF
FL101 SFT5.74MA
FL102 SFT5.5MA
VL101 V1173-035 5.74 SUB FM DET
VL102 V1173-033 5.5 MAIN FM DET
VR101 1K STEREO SEPARATION
X101 APS1006 10MHz
X1 APS 1007 11.648MHz
EOH-DN ONLY
EK-N ONLY
EOH-N/DN ONLY
EXCEPT EOH-DN
EXCEPT EK-N
P62 SIF GND
TO VIF UNIT P2
P11 D.GND I²C SCL I²C SDA AL12V AL5V
P10 TU.A.R GND TU.A.L
P9 FM.MONO GND GND
TO MAIN PCB 1/3 P611
TO MAIN PCB 1/3 P610
TO MAIN PCB 1/3 P609
D-NICAM PCB V1190A5070

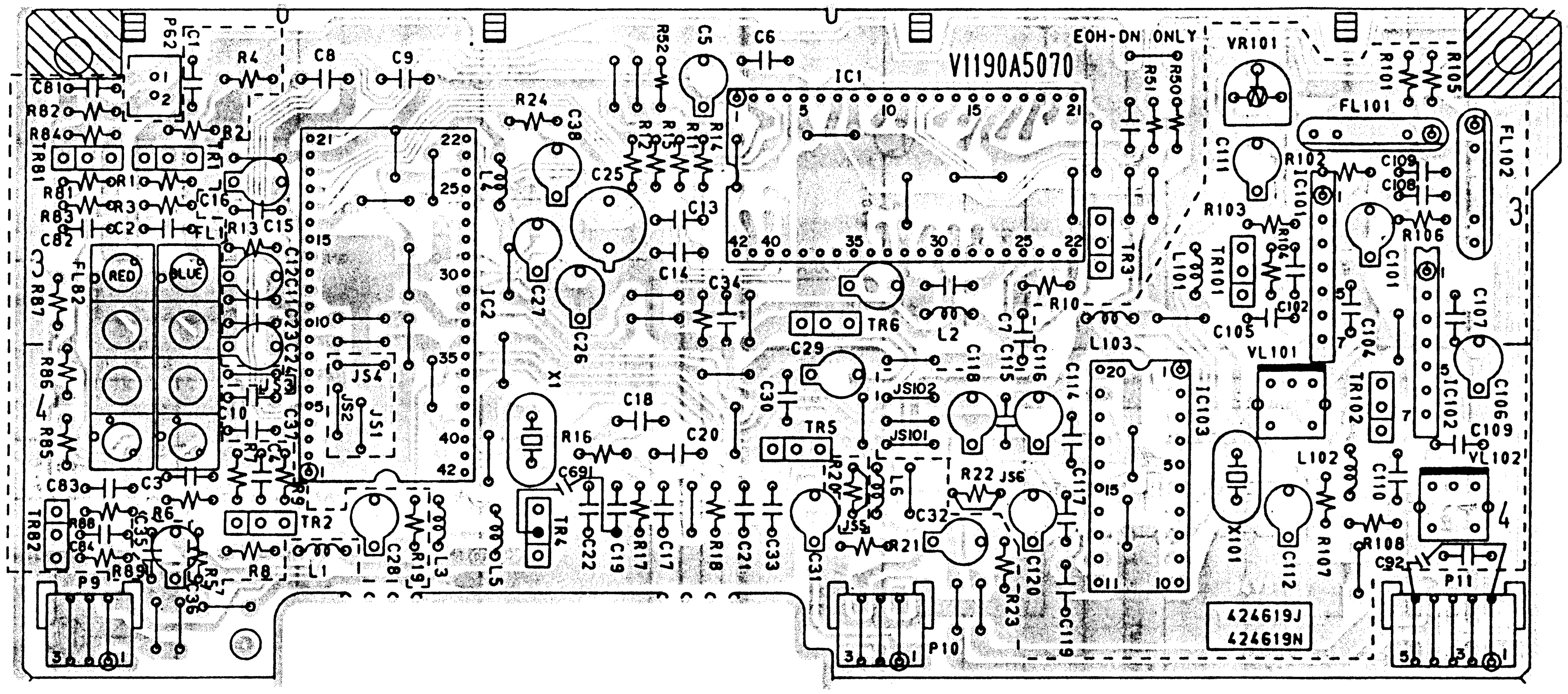
B (POWER SUPPLY) LINE
SIF & PCM DATA LINE
AUDIO SIGNAL LINE

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W (J)
ALL CAPACITORS IN μF 50WV (M)
ALL ELECTROLYTIC CAPACITORS IN μF/WV
ALL INDUCTORS IN μH (K)

INDICATED VOLTAGES WERE MEASURED
DURING E-E MODE.
(NO SIGNAL WAS BEING INPUT.)

VS-G715EK-N/EOH-N/EOH-DN
D-NICAM
SCHEMATIC DIAGRAM

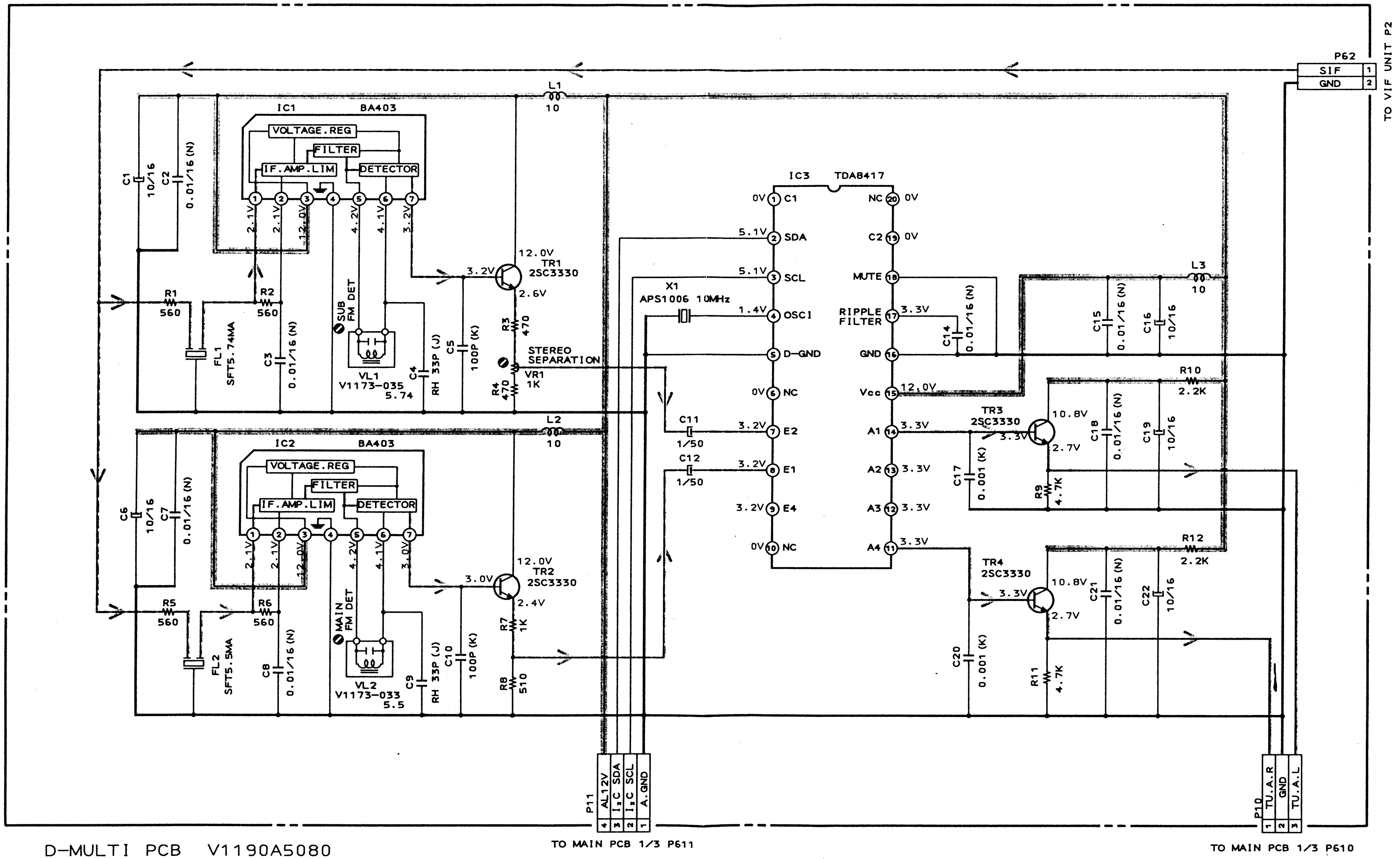
No.19-10 V119010M
A1



V1190A5070
EOH-DN ONLY
IC1
IC2
IC101
IC102
IC103
VR101
FL101
FL102
TR2
TR3
TR4
TR5
TR6
TR101
TR102
VL101
VL102
X1
X101
RED
BLUE
P9
P10
P11
P62
424619J
424619N

D-NICAM PCB V1190A5070
(EK-N, EOH-N/DN ONLY)

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER.
REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT
PARTS INFORMATION.


P62
SIF 1
GND 2
TO VIF UNIT P2
L1
10
IC1
BA403
VOLTAGE.REG
FILTER
IF.AMP.LIM
DETECTOR
2.1V
2.1V
12.0V
4.2V
4.1V
3.2V
C1
10/16
C2
0.01/16 (N)
R1
560
R2
560
FL1
SFT5.74MA
C3
0.01/16 (N)
SUB FM DET
VL1
V1173-035
5.74
C4
RH 33P (J)
C5
100P (K)
12.0V
TR1
2SC3330
3.2V
2.6V
R3
470
STEREO SEPARATION
VR1
1K
R4
470
L2
10
IC2
BA403
C6
10/16
C7
0.01/16 (N)
R5
560
R6
560
FL2
SFT5.5MA
C8
0.01/16 (N)
MAIN FM DET
VL2
V1173-033
5.5
C9
RH 33P (J)
C10
100P (K)
3.0V
12.0V
TR2
2SC3330
2.4V
R7
1K
R8
510
IC3
TDA8417
0V C1
5.1V SDA
5.1V SCL
1.4V OSCI
D-GND
0V NC
3.2V E2
3.2V E1
3.2V E4
0V NC
NC 0V
C2 0V
MUTE
RIPPLE FILTER 3.3V
GND
Vcc 12.0V
A1 3.3V
A2 3.3V
A3 3.3V
A4 3.3V
X1
APS1006 10MHz
C11
1/50
C12
1/50
C14
0.01/16 (N)
C15
0.01/16 (N)
C16
10/16
L3
10
R10
2.2K
TR3
2SC3330
10.8V
3.3V
2.7V
C17
0.001 (K)
R9
4.7K
C18
0.01/16 (N)
C19
10/16
R12
2.2K
TR4
2SC3330
10.8V
3.3V
2.7V
C20
0.001 (K)
R11
4.7K
C21
0.01/16 (N)
C22
10/16
P11
AL12V 4
I2C SDA 3
I2C SCL 2
A.GND 1
TO MAIN PCB 1/3 P611
P10
TU.A.R 1
GND 2
TU.A.L 3
TO MAIN PCB 1/3 P610

D-MULTI PCB V1190A5080

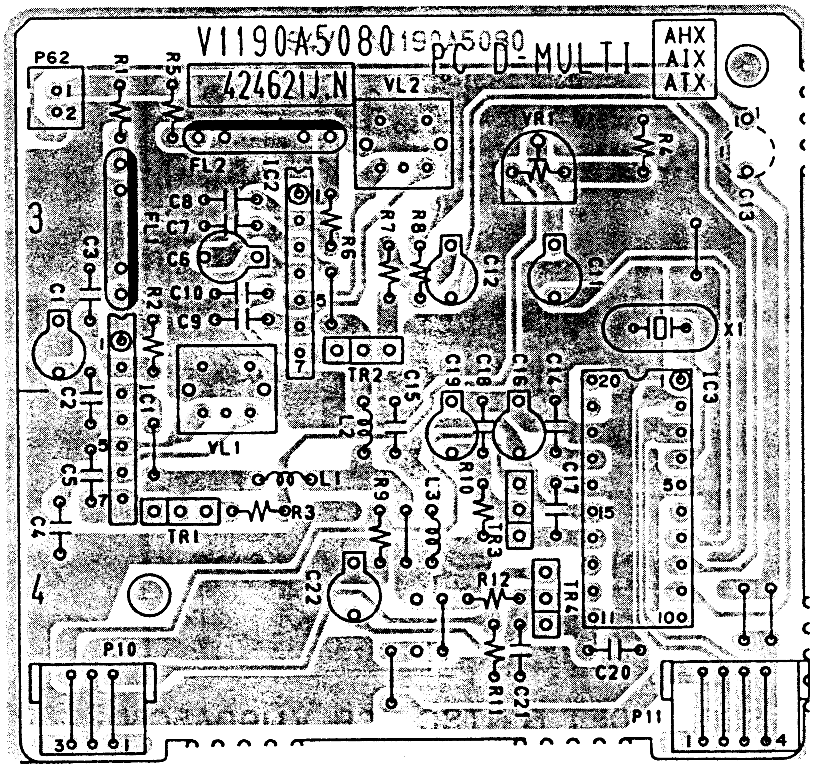
▬ B (POWER SUPPLY) LINE
– – – – IF OR DETECTED SIGNAL LINE
—— AUDIO OUT SIGNAL LINE

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W (J)
ALL CAPACITORS IN µF 50WV (M)
ALL ELECTROLYTIC CAPACITORS IN µF/WV
ALL INDUCTORS IN µH (K)

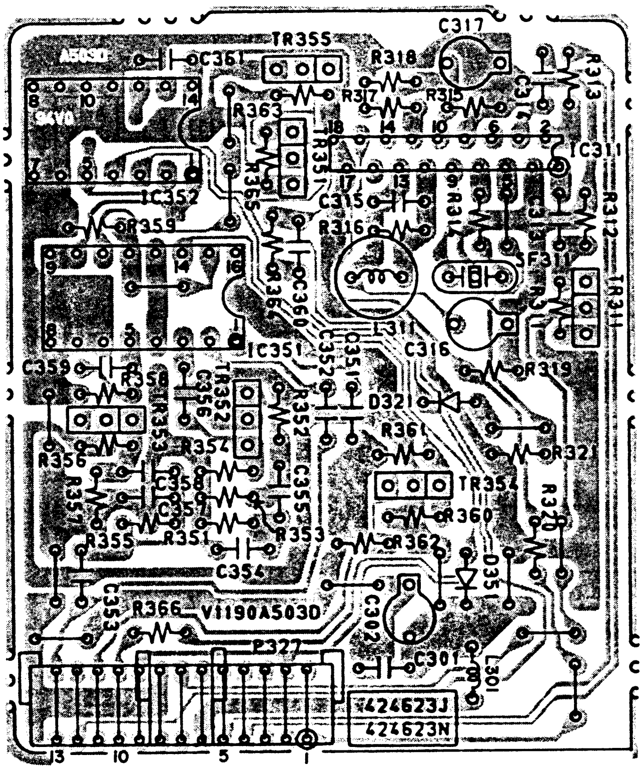
INDICATED VOLTAGES WERE MEASURED
DURING E-E MODE.
(NO SIGNAL WAS BEING INPUT.)

VS-G705EA-D/EOH-D
VS-G712EOG-D
VS-G715EO-D, VS-G717EOG-D
D-MULTI
SCHEMATIC DIAGRAM

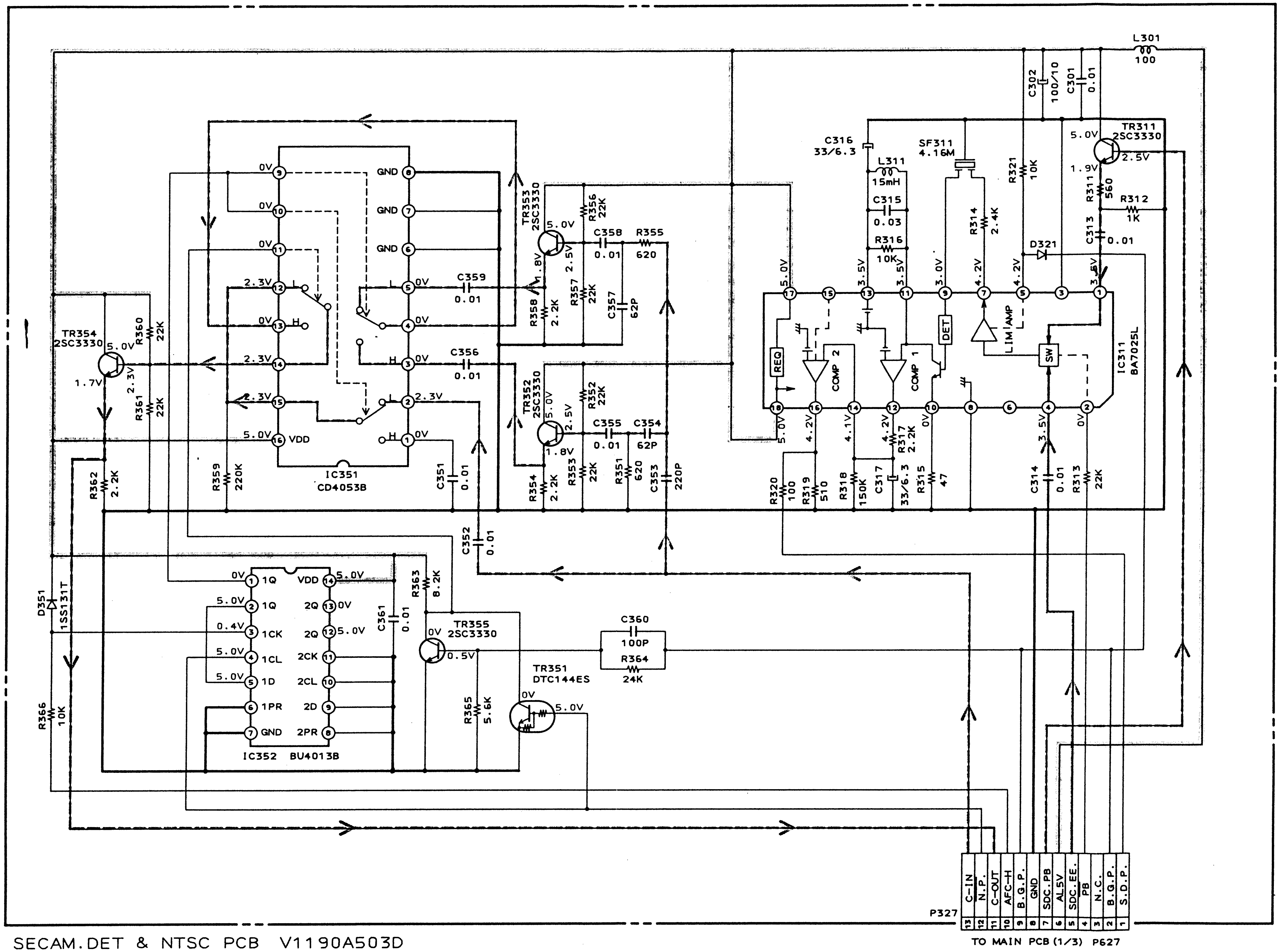
No.19-11 V119011M
A3


V1190A5080
PC D-MULTI
AHX
AIX
ATX
424621J N
P62
R1
R5
VL2
FL2
IC2
C8
C7
C6
C10
C9
FL1
R2
C3
C1
C2
C5
C4
IC1
VL1
L1
R3
TR1
TR2
R6
R7
R8
C12
VR1
R4
C13
C11
X1
IC3
C14
C16
C18
C19
C15
L2
R9
R10
L3
TR3
C17
TR4
R12
R11
C21
C20
C22
P10
P11
3
4

D-MULTI PCB V1190A5080
(EA-D,EO-D,EOG-D,EOH-D)


C317
TR355
A503D
C361
R318
R313
8
10
14
R317
R315
S4V0
R363
18
14
10
6
2
IC311
7
1
R35
R365
17
13
9
IC352
C315
R314
R312
R359
R316
C3
SF311
9
14
16
R36
C360
TR311
8
5
1
L311
IC351
C352
C351
C316
C359
R358
C356
TR352
R352
D321
R319
TR353
R361
R321
R356
R354
C358
C355
TR354
R32
R357
C357
R360
R355
R351
R353
R362
D351
C354
C353
R366
V1190A503D
C302
P327
C301
L301
424623J
424623N
13
10
5
1

SECAM.DET & NTSC PCB V1190A503D
(EDG ONLY)


TR354 2SC3330
5.0V
1.7V
2.3V
R360 22K
R361 22K
R362 2.2K
D351 1SS131T
R366 10K
IC351 CD4053B
VDD
GND
R359 220K
C351 0.01
C359 0.01
C356 0.01
TR353 2SC3330
R356 22K
C358 0.01
R355 620
R358 2.2K
R357 22K
C357 62P
TR352 2SC3330
R352 22K
C355 0.01
C354 62P
R354 2.2K
R353 22K
R351 620
C353 220P
C352 0.01
IC352 BU4013B
1Q
1Q
1CK
1CL
1D
1PR
GND
2PR
2D
2CL
2CK
2Q
2Q
VDD
R363 8.2K
C361 0.01
TR355 2SC3330
0.5V
R365 5.6K
TR351 DTC144ES
C360 100P
R364 24K
L301 100
C302 100/10
C301 0.01
TR311 2SC3330
1.9V
2.5V
C316 33/6.3
L311 15mH
C315 0.03
R316 10K
SF311 4.16M
R314 2.4K
R321 10K
R311 560
R312 1K
C313 0.01
D321
IC311 BA7025L
REG
COMP 2
COMP 1
DET
LIM AMP
SW
R320 100
R319 510
R318 150K
C317 33/6.3
R317 2.2K
R315 47
C314 0.01
R313 22K
P327
13 C-IN
12 N.P.
11 C-OUT
10 AFC-H
9 B.G.P.
8 GND
7 SDC.PB
6 AL5V
5 SDC.EE.
4 PB
3 N.C.
2 B.G.P.
1 S.D.P.
TO MAIN PCB (1/3) P627

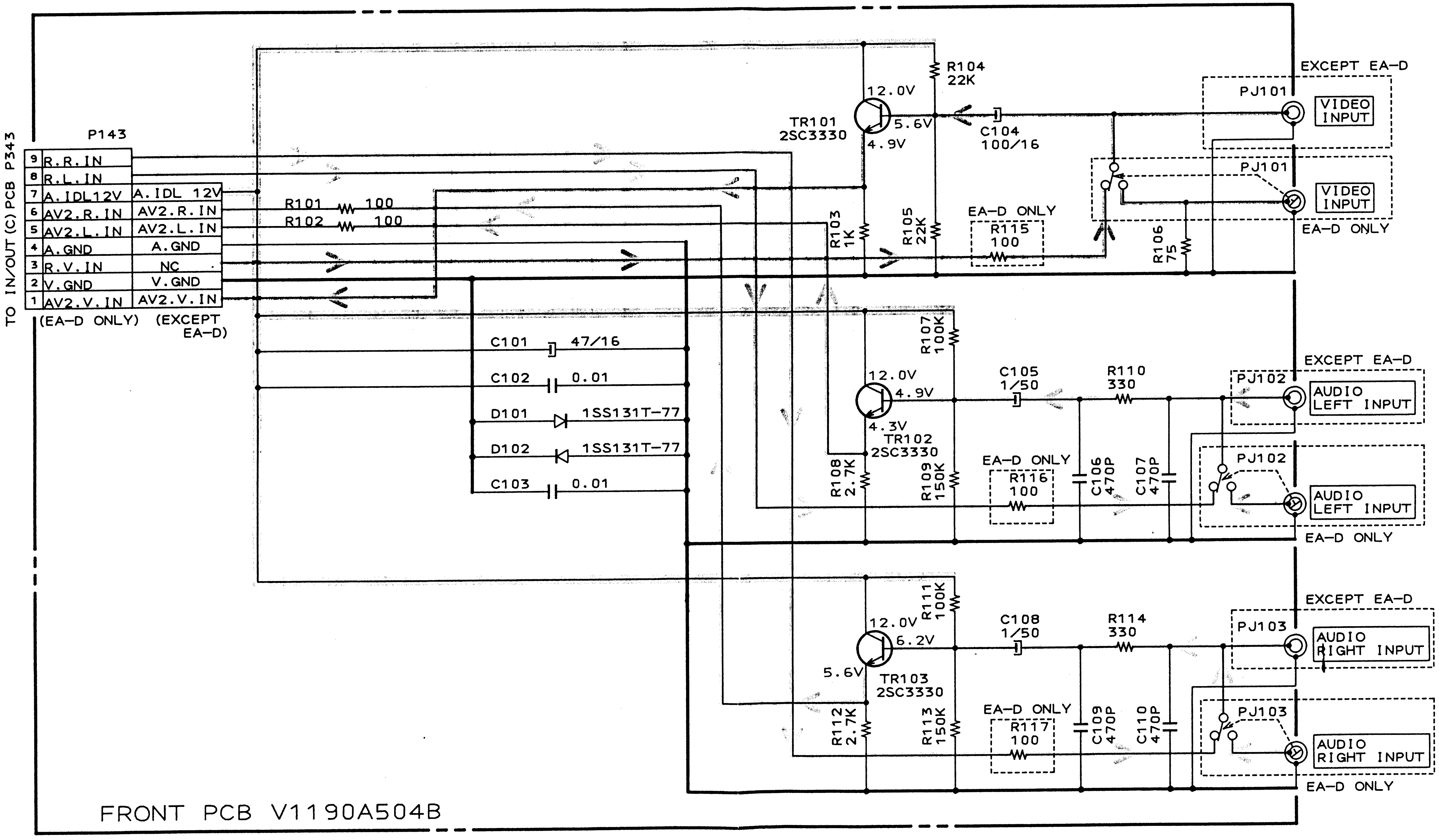
SECAM.DET & NTSC PCB V1190A503D

▨▨▨▨▨ B (POWER SUPPLY) LINE
– – – – – PB CHROMA SIGNAL LINE
——— E-E CHROMA SIGNAL LINE

NOTE:
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN μF (P=PF)
ALL ELECTROLYTIC CAPACITORS IN μF/WV
ALL INDUCTORS IN μH (K)

INDICATED VOLTAGES WERE
MEASURED DURING PB MODE.
(TAPE USED: PAL RECORDED
TAPE) (TAPE SPEED: SP)

VS-G711EDG
SECAM DET & NTSC
SCHEMATIC DIAGRAM
No.19-12 V119012M
A3

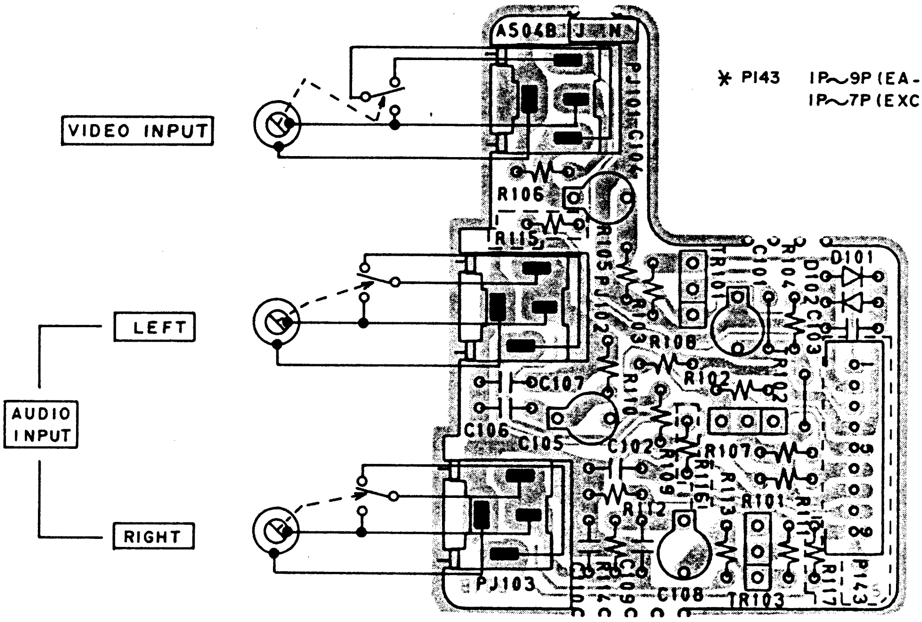

TO IN/OUT (C) PCB P343
P143
9 R.R.IN
8 R.L.IN
7 A.IDL12V A.IDL 12V
6 AV2.R.IN AV2.R.IN
5 AV2.L.IN AV2.L.IN
4 A.GND A.GND
3 R.V.IN NC
2 V.GND V.GND
1 AV2.V.IN AV2.V.IN
(EA–D ONLY) (EXCEPT EA–D)
R101 100
R102 100
C101 47/16
C102 0.01
D101 1SS131T–77
D102 1SS131T–77
C103 0.01
12.0V
TR101 2SC3330
5.6V
4.9V
R104 22K
C104 100/16
R103 1K
R105 22K
EA–D ONLY
R115 100
R106 75
EXCEPT EA–D
PJ101
VIDEO INPUT
PJ101
VIDEO INPUT
EA–D ONLY
R107 100K
12.0V
4.9V
4.3V
TR102 2SC3330
C105 1/50
R110 330
EXCEPT EA–D
PJ102
AUDIO LEFT INPUT
R108 2.7K
R109 150K
EA–D ONLY
R116 100
C106 470P
C107 470P
PJ102
AUDIO LEFT INPUT
EA–D ONLY
R111 100K
12.0V
6.2V
5.6V
TR103 2SC3330
C108 1/50
R114 330
EXCEPT EA–D
PJ103
AUDIO RIGHT INPUT
R112 2.7K
R113 150K
EA–D ONLY
R117 100
C109 470P
C110 470P
PJ103
AUDIO RIGHT INPUT
EA–D ONLY
FRONT PCB V1190A504B

B (POWER SUPPLY) LINE
AUDIO IN SIGNAL LINE
VIDEO IN SIGNAL LINE

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN μF
ALL ELECTROLYTIC CAPACITOR IN μF/WV

INDICATED VOLTAGES WERE
MEASURED DURING PB MODE.
(TAPE SPEED:SP)

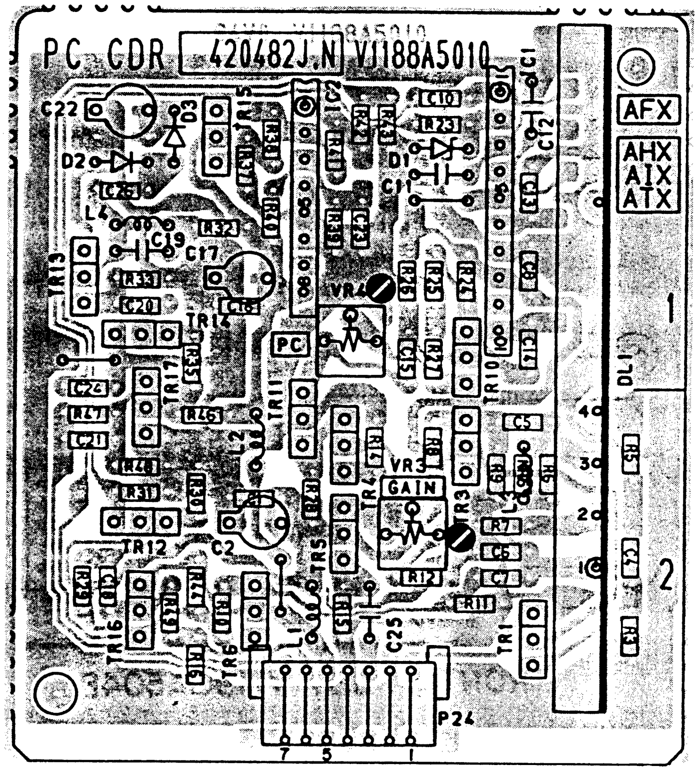
FRONT
SCHEMATIC DIAGRAM
No.19–13 V119013M
A3


VIDEO INPUT
AUDIO INPUT
LEFT
RIGHT
A504B
J
N
PJ101
C104
R106
R115
R105
PJ102
R103
R108
TR101
C101
R104
D102
C103
D101
C107
R110
R102
R112
C106
C105
C102
R109
R107
R116
R113
R101
R111
R117
P143
PJ103
C110
C109
C108
TR103

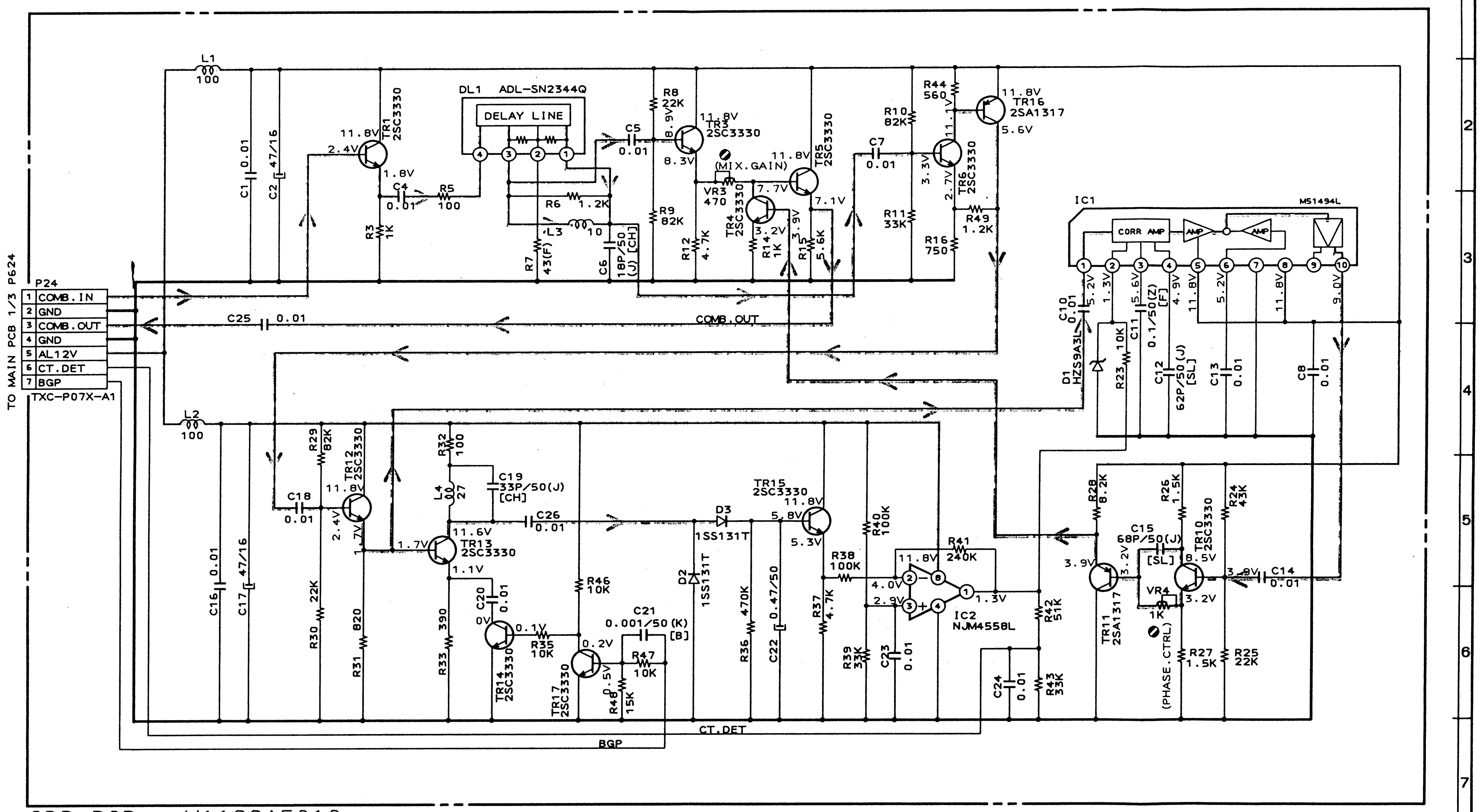
✱ P143 1P～9P (EA-D ONLY)
1P～7P (EXCEPT EA-D)

FRONT PCB V1190A504B

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER. REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.


PC CDR
420482J.N
V1188A5010
AFX
AHX
AIX
ATX
C22
D3
D2
C23
L4
C19
C17
R32
R33
C20
C18
TR13
TR14
TR17
R35
C24
R47
C21
R46
R48
R31
R30
TR12
C2
TR16
TR6
R16
L1
L2
TR11
PC
VR4
IC2
C10
R23
D1
C11
C1
C12
R26
R25
R27
C15
TR10
VR3
GAIN
TR3
TR4
TR5
R12
R7
C6
C7
R11
C25
TR1
C5
DL1
1
2
4
3
2
1
R5
C4
R3
P24
7
5
1

CDR PCB V1188A5010(EOG-D ONLY)


TO MAIN PCB 1/3 P624
P24
1 COMB.IN
2 GND
3 COMB.OUT
4 GND
5 AL12V
6 CT.DET
7 BGP
TXC-P07X-A1
L1 100
C1 0.01
C2 47/16
TR1 2SC3330
11.8V
2.4V
1.8V
C4 0.01
R5 100
R3 1K
DL1 ADL-SN2344Q
DELAY LINE
R6 1.2K
L3 10
R7 43(F)
C6 18P/50 (J) [CH]
C5 0.01
R8 22K
8.9V
TR3 2SC3330
11.8V
8.3V
R9 82K
(MIX.GAIN)
VR3 470
7.7V
TR4 2SC3330
R12 4.7K
3.2V
R14 1K
3.9V
R15 5.6K
TR5 2SC3330
11.8V
7.1V
C7 0.01
R10 82K
R11 33K
3.3V
2.7V
TR6 2SC3330
11.1V
R44 560
TR16 2SA1317
11.8V
5.6V
R49 1.2K
R16 750
C25 0.01
COMB.OUT
IC1
M51494L
CORR AMP
AMP
AMP
5.2V
1.3V
5.6V
4.9V
11.8V
5.2V
11.8V
9.0V
C10 0.01
D1 HZS9A3L
R23 10K
C11 0.1/50(Z) [F]
C12 62P/50(J) [SL]
C13 0.01
C8 0.01
L2 100
C16 0.01
C17 47/16
R29 82K
C18 0.01
TR12 2SC3330
11.8V
2.4V
1.7V
R30 22K
R31 820
R32 100
L4 27
C19 33P/50(J) [CH]
11.6V
C26 0.01
1.7V
TR13 2SC3330
1.1V
R33 390
C20 0.01
0V
0.1V
TR14 2SC3330
R35 10K
0.2V
TR17 2SC3330
0.5V
R48 15K
R46 10K
C21 0.001/50 (K) [B]
R47 10K
D3 1SS131T
D2 1SS131T
TR15 2SC3330
11.8V
5.8V
5.3V
R36 470K
C22 0.47/50
R37 4.7K
R38 100K
R40 100K
R41 240K
11.8V
4.0V
2.9V
1.3V
IC2 NJM4558L
R39 33K
C23 0.01
C24 0.01
R42 51K
R43 33K
R28 8.2K
3.9V
3.2V
TR11 2SA1317
C15 68P/50(J) [SL]
R26 1.5K
TR10 2SC3330
8.5V
3.9V
3.2V
C14 0.01
VR4 1K
(PHASE.CTRL)
R27 1.5K
R24 43K
R25 22K
CT.DET
BGP

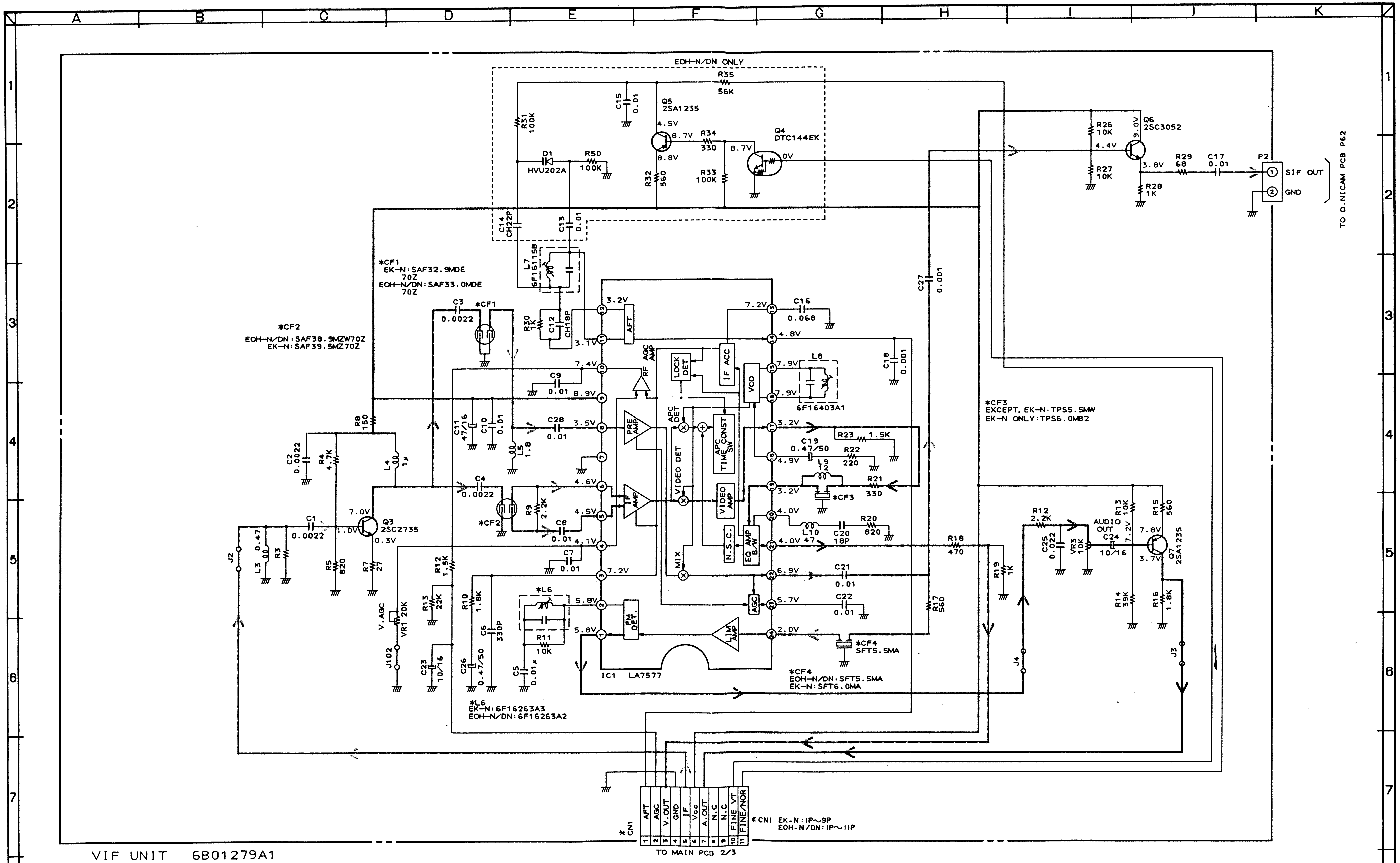
CDR PCB V1188A5010

- B (POWER SUPPLY) LINE
- PB CHROMA SIGNAL LINE
- CROSSTALK OR NON-CORELATED SIGNAL LINE

NOTE:
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/8W (J)
ALL CAPACITORS IN μF (P=PF) 16WV (N)
ALL ELECTROLYTIC CAPACITORS IN μF/WV (M)
ALL INDUCTORS IN μH (J)

INDICATED VOLTAGES WERE
MEASURED DURING PB MODE.
(TAPE USED: PAL RECORDED
TAPE)

VS-G712EOG-D
VS-G717EOG-D
CDR
SCHEMATIC DIAGRAM
No.19-14 V118410F
A3


EOH-N/DN ONLY
R35 56K
C15 0.01
Q5 2SA1235
R31 100K
4.5V
8.7V
R34 330
Q4 DTC144EK
D1 HVU202A
R50 100K
8.8V
0V
R32 560
R33 100K
C14 CH22P
C13 0.01
L7 6F16115B
*CF1 EK-N:SAF32.9MDE 70Z EOH-N/DN:SAF33.0MDE 70Z
C3 0.0022
*CF1
*CF2 EOH-N/DN:SAF38.9MZW70Z EK-N:SAF39.5MZ70Z
R30 1K
C12 CH18P
3.2V
3.1V
AFT
7.2V
C16 0.068
4.8V
C27 0.001
C18 0.001
7.4V
C9 0.01
RF AGC AMP
LOCK DET
IF ACC
VCO
7.9V
L8
6F16403A1
8.9V
R8 150
C11 47/16
C10 0.01
C28 0.01
3.5V
PRE AMP
APC DET
VIDEO DET
APC TIME CONST SW
3.2V
R23 1.5K
C19 0.47/50
R22 220
4.9V
L9 12
R21 330
C2 0.0022
R4 4.7K
L4 1μ
L5 1.8
C4 0.0022
4.6V
IF AMP
VIDEO AMP
*CF3
*CF3 EXCEPT. EK-N:TPS5.5MW EK-N ONLY:TPS6.0MB2
R9 2.2K
4.5V
C8 0.01
*CF2
4.0V
L10 47
C20 18P
R20 820
7.0V
Q3 2SC2735
1.0V
0.3V
C1 0.0022
J2
L3
0.47
R3
R5 820
R7 27
R12 1.5K
4.1V
C7 0.01
N.S.C.
EQ AMP B/W
4.0V
R18 470
MIX
6.9V
C21 0.01
7.2V
R19 1K
R12 2.2K
C25 0.022
VR3 10K
AUDIO OUT
C24 10/16
7.2V
R13 10K
R15 560
7.8V
Q7 2SA1235
3.7V
V.AGC
VR1 20K
R13 22K
R10 1.8K
C6 330P
*L6
5.8V
FM DET.
AGC
5.7V
C22 0.01
R17 560
R14 39K
R16 1.8K
R11 10K
5.8V
LIM AMP
2.0V
*CF4 SFT5.5MA
J102
C23 10/16
C26 0.47/50
C5 0.01μ
IC1 LA7577
*CF4 EOH-N/DN:SFT5.5MA EK-N:SFT6.0MA
J4
J3
*L6 EK-N:6F16263A3 EOH-N/DN:6F16263A2
R26 10K
9.0V
Q6 2SC3052
4.4V
R27 10K
3.8V
R29 68
C17 0.01
R28 1K
P2
SIF OUT
GND
TO D.NICAM PCB P62
*CN1
AFT
AGC
V.OUT
GND
IF
Vcc
A.OUT
N.C
N.C
FINE VT
FINE/NOR
*CNI EK-N:IP~9P EOH-N/DN:IP~IIP
TO MAIN PCB 2/3

VIF UNIT 6B01279A1

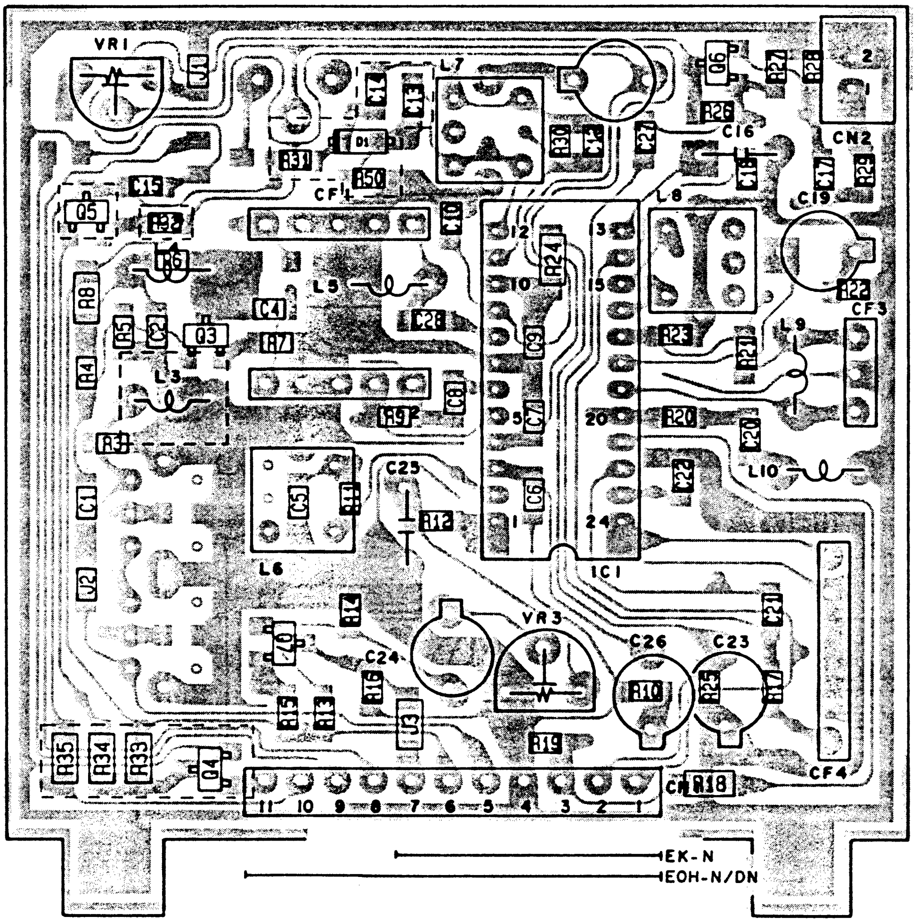
INDICATED VOLTAGES WERE MEASURED
DURING E-E (STOP) MODE.
(WHEN A STATION WAS BEING RECEIVED)

:B (POWER SUPPLY) LINE
:IF SIGNAL LINE
:AUDIO SIGNAL LINE
:VIDEO SIGNAL LINE

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN μF
ALL INDUCTORS IN μH

VIF UNIT
SCHEMATIC DIAGRAM

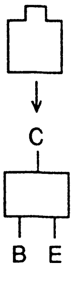
No.19-15 V119014M
A2

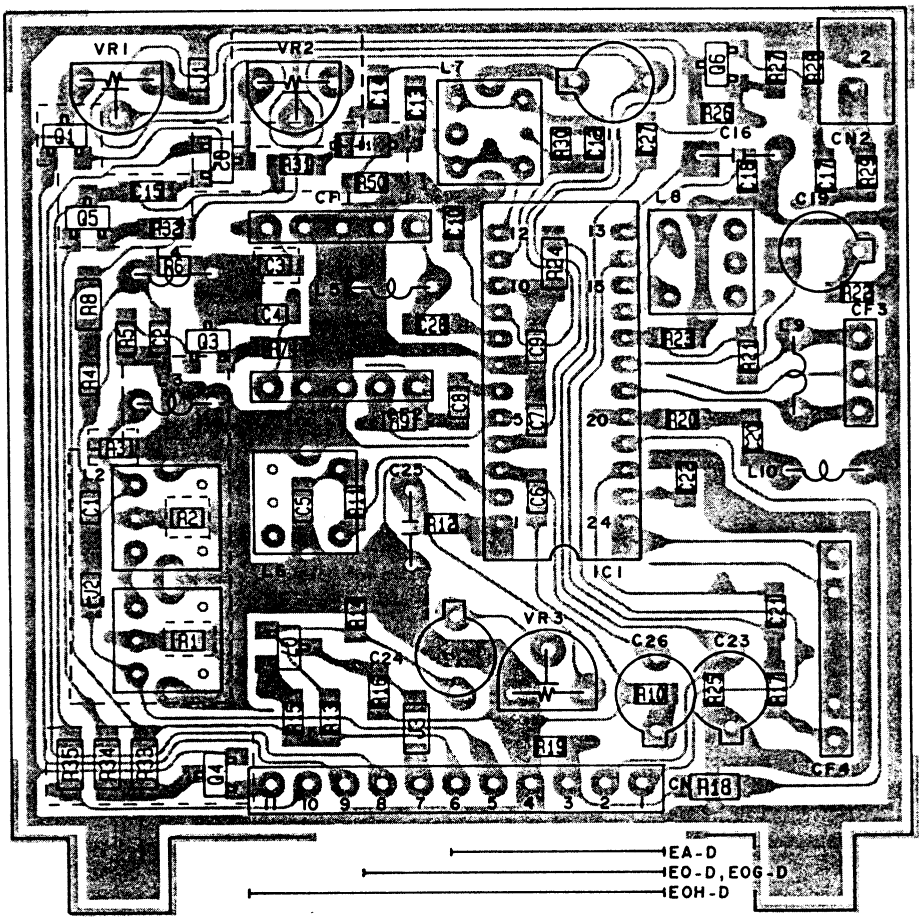

VR1
J1
L7
Q6
R27
R28
2
1
CN2
D1
R31
R50
R26
C16
C18
C17
R29
C19
R30
C21
Q5
C15
R32
R6
CF1
C10
12
13
R24
L8
10
15
L5
C4
C28
R22
CF3
R8
R5
C2
Q3
R7
C9
R23
R21
L9
R4
L3
C8
R9
5
C7
20
R20
C20
R3
C25
C6
R22
L10
C1
C5
R11
R12
1
24
J2
L6
IC1
R14
VR3
R21
Q7
C24
C26
C23
R16
R10
R25
R17
R15
R13
L13
R19
R35
R34
R33
Q4
11
10
9
8
7
6
5
4
3
2
1
CP
R18
CF4
EK-N
EOH-N/DN

VIF UNIT 6B01279A1 (EK-N, EOH-N/DN ONLY)

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER. REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.

SINGLE CHIP TRANSISTOR

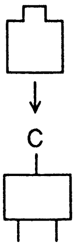


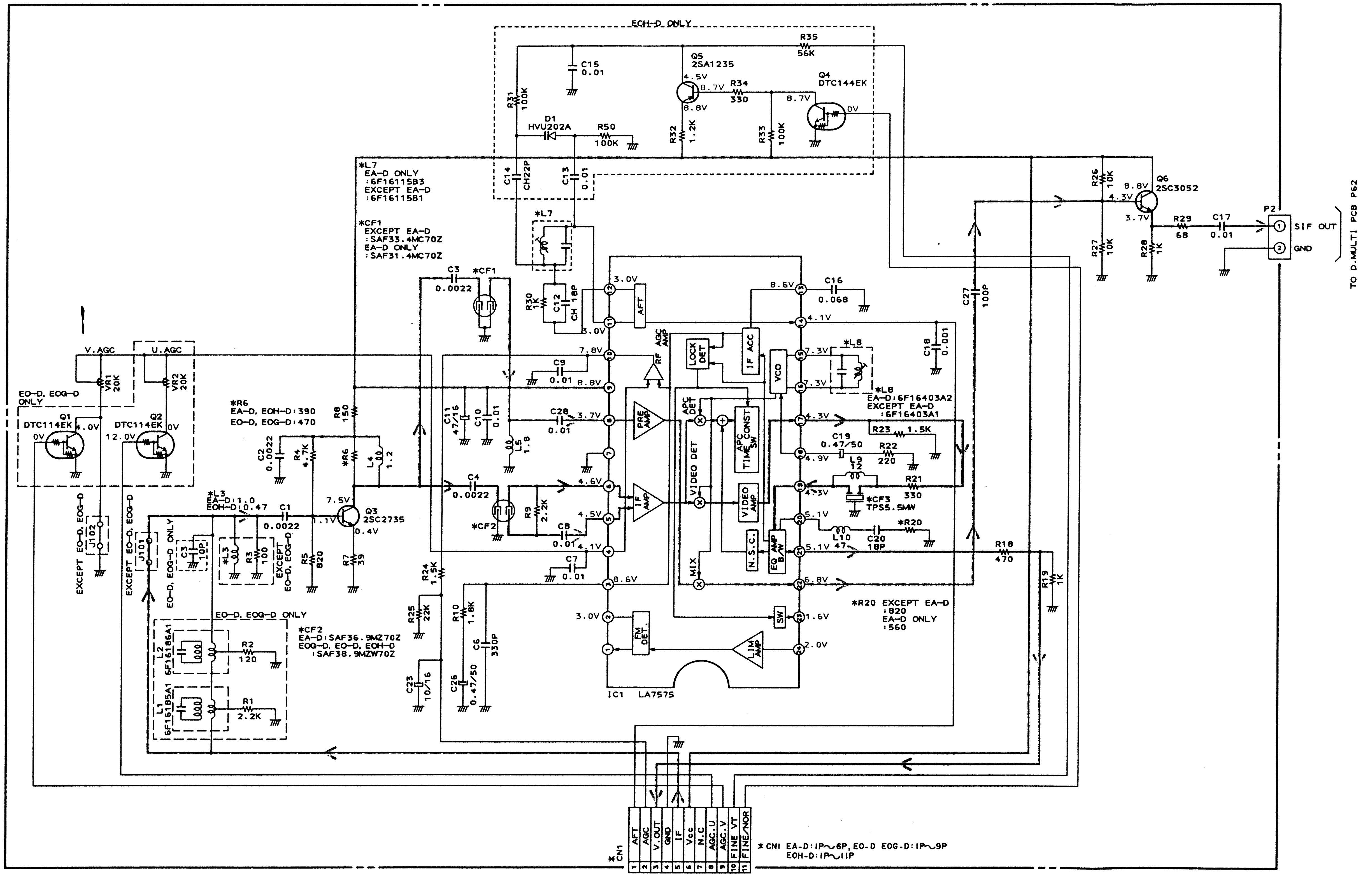

VR1
VR2
L7
Q6
R27
R28
2
CN2
R26
C16
Q1
Q2
R31
CF1
R50
R30
C14
C27
C15
C17
R29
C19
Q5
R32
C10
L8
R6
C3
R24
12
13
10
15
R22
CF3
R8
L5
C4
C28
R23
R21
R5
Q3
R7
C9
R4
C8
R9
C7
5
20
R20
R3
C25
L10
C1
R2
C5
R11
R12
C6
24
IC1
R1
VR3
C26
C23
C24
C21
R16
R10
R25
R19
R35
R34
R33
Q4
11
10
9
8
7
6
5
4
3
2
1
CN
R18
CF4
EA-D
EO-D, EOG-D
EOH-D

VIF UNIT 6B01279A1
(EA-D, EO-D, EOG-D, EOH-D ONLY)

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER. REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.

SINGLE CHIP TRANSISTOR




EOH-D ONLY
R35 56K
C15 0.01
Q5 2SA1235
R34 330
Q4 DTC144EK
R31 100K
D1 HVU202A
R50 100K
R32 1.2K
R33 100K
C14 CH22P
C13 0.01
*L7 EA-D ONLY :6F16115B3 EXCEPT EA-D :6F16115B1
*CF1 EXCEPT EA-D :SAF33.4MC70Z EA-D ONLY :SAF31.4MC70Z
C3 0.0022
R30 1K
C12 CH 18P
AFT
AGC AMP
RF AMP
PRE AMP
IF AMP
LOCK DET
IF ACC
VCO
APC DET
APC TIME CONST SW
VIDEO DET
VIDEO AMP
N.S.C.
EQ AMP B/W
MIX
SW
FM DET.
LIM AMP
IC1 LA7575
C16 0.068
C18 0.001
*L8 EA-D:6F16403A2 EXCEPT EA-D :6F16403A1
R23 1.5K
C19 0.47/50
R22 220
L9 12
R21 330
*CF3 TPS5.5MW
*R20
L10 47
C20 18P
*R20 EXCEPT EA-D :820 EA-D ONLY :560
C27 100P
R18 470
R19 1K
R26 10K
R27 10K
Q6 2SC3052
R28 1K
R29 68
C17 0.01
P2
SIF OUT
GND
TO D.MULTI PCB P62
V.AGC
U.AGC
VR1 20K
VR2 20K
EO-D, EOG-D ONLY
Q1 DTC114EK
Q2 DTC114EK
*R6 EA-D, EOH-D:390 EO-D, EOG-D:470
R8 150
C11 47/16
C10 0.01
L5 1.8
C9 0.01
C28 0.01
C2 0.0022
R4 4.7K
L4 1.2
*L3 EA-D:1.0 EOH-D:0.47
C1 0.0022
Q3 2SC2735
R5 820
R7 39
C4 0.0022
*CF2
R9 2.2K
C8 0.01
C7 0.01
J102 EXCEPT EO-D, EOG-D
J101 EXCEPT EO-D, EOG-D
C31 10P EO-D, EOG-D ONLY
R3 100 EXCEPT EO-D, EOG-D
R24 1.5K
R25 22K
R10 1.8K
C6 330P
C23 10/16
C26 0.47/50
EO-D, EOG-D ONLY
L2 6F16186A1
R2 120
L1 6F16185A1
R1 2.2K
*CF2 EA-D:SAF36.9MZ70Z EOG-D, EO-D, EOH-D :SAF38.9MZW70Z
*CN1
AFT
AGC
V.OUT
GND
IF
Vcc
N.C
AGC.U
AGC.V
FINE VT
FINE/NOR
*CNI EA-D:IP~6P, EO-D EOG-D:IP~9P EOH-D:IP~11P
TO MAIN PCB 2/3

VIF UNIT 6B01279A1

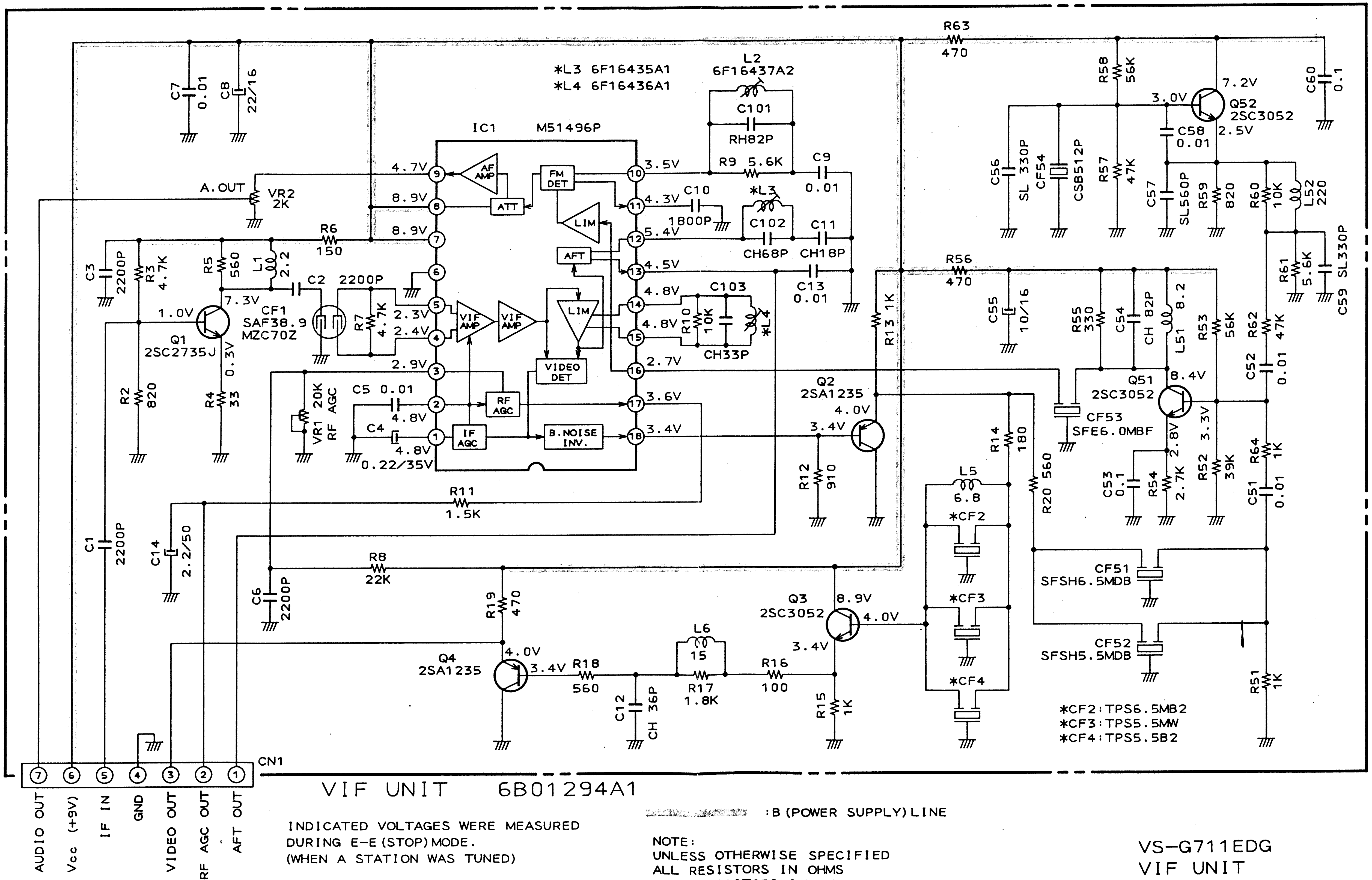
INDICATED VOLTAGES WERE MEASURED
DURING E-E (STOP) MODE.
(WHEN A STATION WAS BEING RECEIVED)

———— :B (POWER SUPPLY) LINE
– – – – :IF SIGNAL LINE
———— :VIDEO SIGNAL LINE

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN μF
ALL INDUCTORS IN μH

VS-G705EA-D/EOH-D
VS-G715EO-D, VS-G712EOG-D
VS-G717EOG-D
VIF UNIT
SCHEMATIC DIAGRAM

No.19-16 V119015M
A2



*L3 6F16435A1
*L4 6F16436A1
IC1 M51496P
L2 6F16437A2
C101 RH82P
R9 5.6K
C9 0.01
C10 1800P
*L3
C102 CH68P
C11 CH18P
C13 0.01
C103
R10 10K
*L4
CH33P
C7 0.01
C8 22/16
A.OUT
VR2 2K
R6 150
C3 2200P
R3 4.7K
R5 560
L1 2.2
C2 2200P
CF1 SAF38.9 MZC70Z
R7 4.7K
Q1 2SC2735J
R2 820
R4 33
VR1 20K RF AGC
C5 0.01
C4 0.22/35V
AF AMP
ATT
FM DET
LIM
AFT
VIF AMP
VIF AMP
LIM
VIDEO DET
RF AGC
IF AGC
B.NOISE INV.
4.7V
8.9V
8.9V
2.3V
2.4V
2.9V
4.8V
4.8V
3.5V
4.3V
5.4V
4.5V
4.8V
4.8V
2.7V
3.6V
3.4V
7.3V
1.0V
0.3V
R11 1.5K
C14 2.2/50
C1 2200P
C6 2200P
R8 22K
R19 470
Q4 2SA1235
4.0V
3.4V
R18 560
C12 CH 36P
L6 15
R17 1.8K
R16 100
R15 1K
Q3 2SC3052
8.9V
4.0V
3.4V
Q2 2SA1235
4.0V
3.4V
R12 910
R13 1K
R63 470
R58 56K
R57 47K
C56 SL 330P
CF54 CSB512P
Q52 2SC3052
3.0V
7.2V
2.5V
C58 0.01
C57 SL560P
R59 820
R60 10K
L52 220
C60 0.1
R61 5.6K
C59 SL330P
R56 470
C55 10/16
R55 330
C54 CH 82P
L51 8.2
R53 56K
R62 47K
C52 0.01
Q51 2SC3052
8.4V
2.8V
3.3V
CF53 SFE6.0MBF
C53 0.1
R54 2.7K
R52 39K
R64 1K
C51 0.01
R14 180
R20 560
L5 6.8
*CF2
*CF3
*CF4
CF51 SFSH6.5MDB
CF52 SFSH5.5MDB
R51 1K
*CF2:TPS6.5MB2
*CF3:TPS5.5MW
*CF4:TPS5.5B2
CN1
⑦ AUDIO OUT
⑥ Vcc (+9V)
⑤ IF IN
④ GND
③ VIDEO OUT
② RF AGC OUT
① AFT OUT
A B C D E F G H I J K
1 2 3 4 5 6 7 8

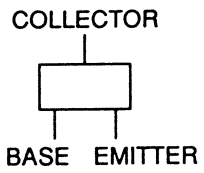
VIF UNIT 6B01294A1

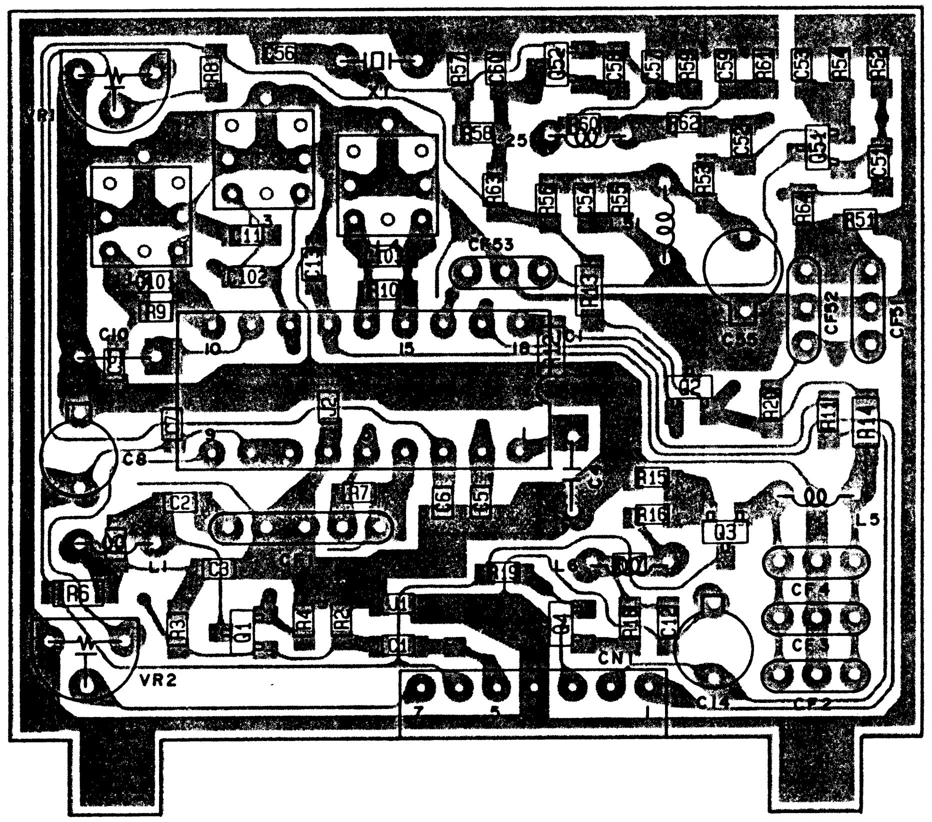
INDICATED VOLTAGES WERE MEASURED
DURING E-E (STOP) MODE.
(WHEN A STATION WAS TUNED)

:B (POWER SUPPLY) LINE

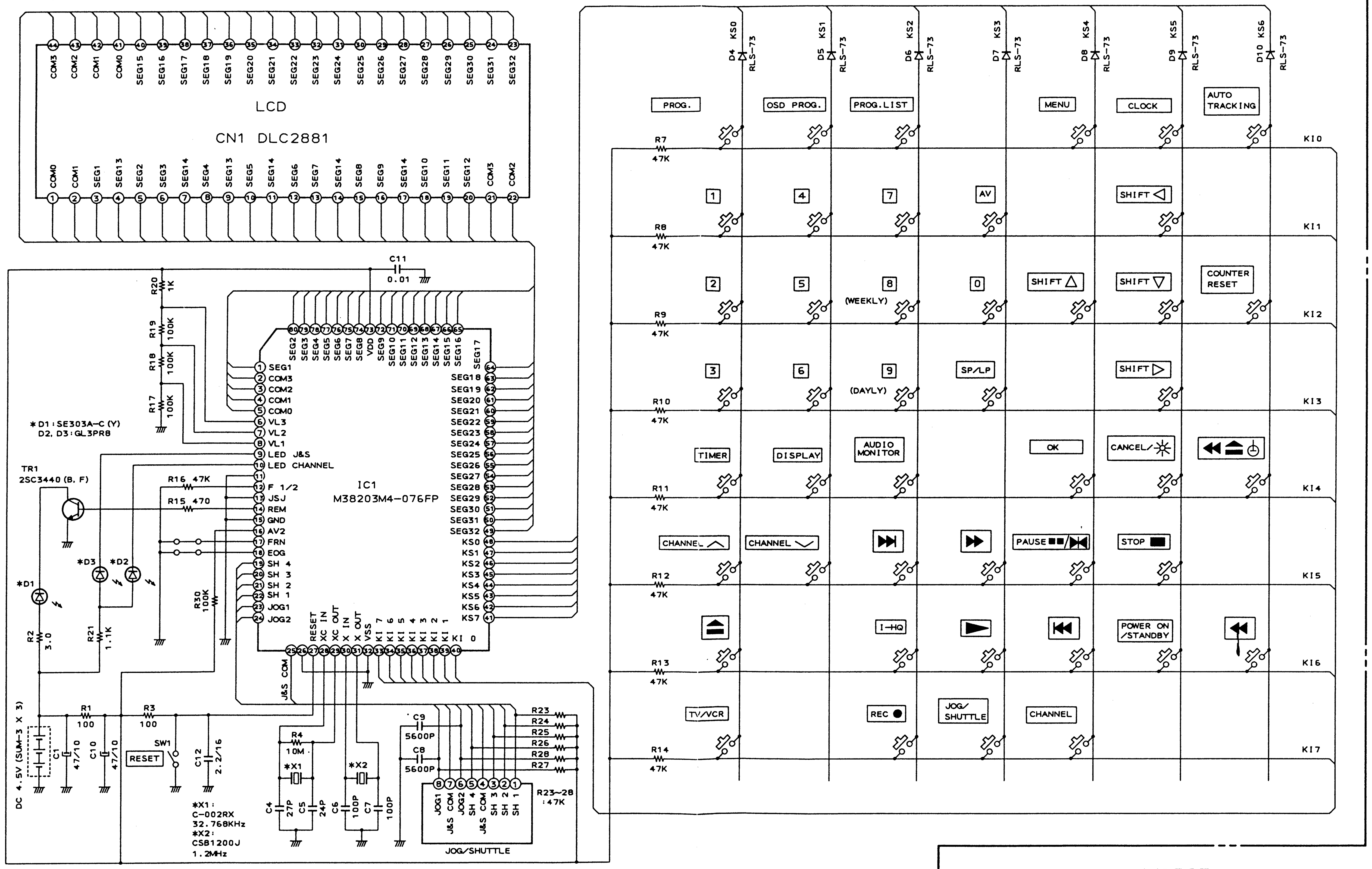
NOTE:
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN μF
ALL INDUCTOR IN μH (K)

VS-G711EDG
VIF UNIT
SCHEMATIC DIAGRAM
No.19-17 V118811M
A3


COLLECTOR
BASE
EMITTER


VR1
VR2
CN1
CF2
CF51
CF52
Q1
Q2
Q3
L1
L5
C8
C10
C14
R6
R7
R14
R15
R16
10
15
18
7
5
1

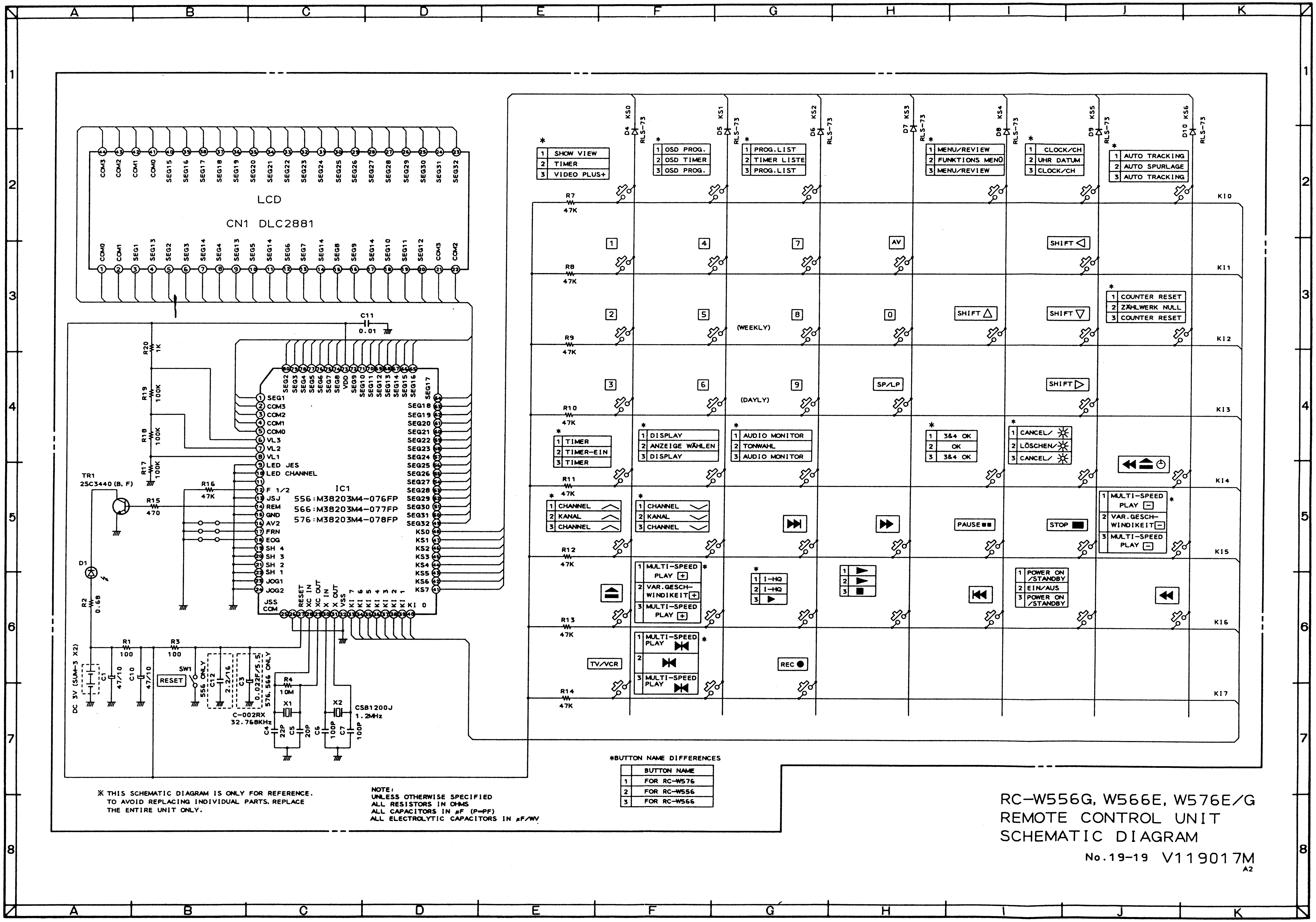
VIF UNIT 6B01294A1(EDG ONLY)


A B C D E F G H I J K
1 2 3 4 5 6 7 8
LCD
CN1 DLC2881
COM3 COM2 COM1 COM0 SEG15 SEG16 SEG17 SEG18 SEG19 SEG20 SEG21 SEG22 SEG23 SEG24 SEG25 SEG26 SEG27 SEG28 SEG29 SEG30 SEG31 SEG32
COM0 COM1 SEG1 SEG13 SEG2 SEG3 SEG14 SEG4 SEG13 SEG5 SEG14 SEG6 SEG7 SEG14 SEG8 SEG9 SEG14 SEG10 SEG11 SEG12 COM3 COM2
C11 0.01
R20 1K
R19 100K
R18 100K
R17 100K
*D1:SE303A-C (Y)
D2, D3:GL3PR8
TR1
2SC3440 (B, F)
*D3 *D2 *D1
R2 3.0
R21 1.1K
R16 47K
R15 470
R30 100K
IC1
M38203M4-076FP
SEG1 COM3 COM2 COM1 COM0 VL3 VL2 VL1 LED J&S LED CHANNEL F 1/2 JSJ REM GND AV2 FRN EOG SH 4 SH 3 SH 2 SH 1 JOG1 JOG2
SEG18 SEG19 SEG20 SEG21 SEG22 SEG23 SEG24 SEG25 SEG26 SEG27 SEG28 SEG29 SEG30 SEG31 SEG32 KS0 KS1 KS2 KS3 KS4 KS5 KS6 KS7
SEG2 SEG3 SEG4 SEG5 SEG6 SEG7 SEG8 VDD SEG9 SEG10 SEG11 SEG12 SEG13 SEG14 SEG15 SEG16 SEG17
RESET XC IN XC OUT X IN X OUT VSS KI 7 KI 6 KI 5 KI 4 KI 3 KI 2 KI 1 KI 0
J&S COM
DC 4.5V (SUM-3 X 3)
R1 100
R3 100
C1 47/10
C10 47/10
RESET
SW1
C12 2.2/16
R4 10M
*X1
*X2
C4 27P C5 24P C6 100P C7 100P
*X1:
C-002RX
32.768KHz
*X2:
CSB1200J
1.2MHz
C9 5600P
C8 5600P
R23 R24 R25 R26 R27 R28
R23~28 :47K
JOG1 J&S COM JOG2 SH 4 J&S COM SH 3 SH 2 SH 1
JOG/SHUTTLE
D4 KS0 RLS-73
D5 KS1 RLS-73
D6 KS2 RLS-73
D7 KS3 RLS-73
D8 KS4 RLS-73
D9 KS5 RLS-73
D10 KS6 RLS-73
R7 47K R8 47K R9 47K R10 47K R11 47K R12 47K R13 47K R14 47K
KI0 KI1 KI2 KI3 KI4 KI5 KI6 KI7
PROG.
OSD PROG.
PROG.LIST
MENU
CLOCK
AUTO TRACKING
1 4 7 AV
SHIFT ◁
2 5 8 0
(WEEKLY)
SHIFT △
SHIFT ▽
COUNTER RESET
3 6 9 SP/LP
(DAYLY)
SHIFT ▷
TIMER
DISPLAY
AUDIO MONITOR
OK
CANCEL/
CHANNEL
CHANNEL
PAUSE
STOP
I-HQ
POWER ON /STANDBY
TV/VCR
REC ●
JOG/ SHUTTLE
CHANNEL

※ THIS SCHEMATIC DIAGRAM IS ONLY FOR REFERENCE.
TO AVOID REPLACING INDIVIDUAL PARTS, REPLACE
THE ENTIRE UNIT ONLY.

NOTE:
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN μF (P=PF)
ALL ELECTROLYTIC CAPACITORS IN μF/WV

RC-W656E
REMOTE CONTROL UNIT
SCHEMATIC DIAGRAM
No.19-18 V119016M
A2


LCD
CN1 DLC2881
IC1
556:M38203M4-076FP
566:M38203M4-077FP
576:M38203M4-078FP
TR1
2SC3440 (B, F)
D1
C11
0.01
R20 1K
R19 100K
R18 100K
R17 100K
R16 47K
R15 470
R2 0.68
R1 100
R3 100
R4 10M
SW1
RESET
DC 3V (SUM-3 X2)
C1 47/10
C10 47/10
C12 2.2/16
C3 0.022F/5.5
X1
C-002RX
32.768KHz
C4 22P
C5 20P
X2
CSB1200J
1.2MHz
C6 100P
C7 100P
R7 47K
R8 47K
R9 47K
R10 47K
R11 47K
R12 47K
R13 47K
R14 47K
KI0
KI1
KI2
KI3
KI4
KI5
KI6
KI7
KS0
KS1
KS2
KS3
KS4
KS5
KS6
RLS-73
SHOW VIEW
TIMER
VIDEO PLUS+
OSD PROG.
OSD TIMER
PROG.LIST
TIMER LISTE
MENU/REVIEW
FUNKTIONS MENÜ
CLOCK/CH
UHR DATUM
AUTO TRACKING
AUTO SPURLAGE
AV
SHIFT ◁
SHIFT △
SHIFT ▽
SHIFT ▷
(WEEKLY)
(DAYLY)
SP/LP
COUNTER RESET
ZÄHLWERK NULL
DISPLAY
ANZEIGE WÄHLEN
AUDIO MONITOR
TONWAHL
3&4 OK
OK
CANCEL/
LÖSCHEN/
CHANNEL
KANAL
PAUSE
STOP
MULTI-SPEED PLAY
VAR.GESCH-WINDIKEIT
I-HQ
POWER ON /STANDBY
EIN/AUS
TV/VCR
REC ●

*BUTTON NAME DIFFERENCES

	BUTTON NAME
1	FOR RC-W576
2	FOR RC-W556
3	FOR RC-W566

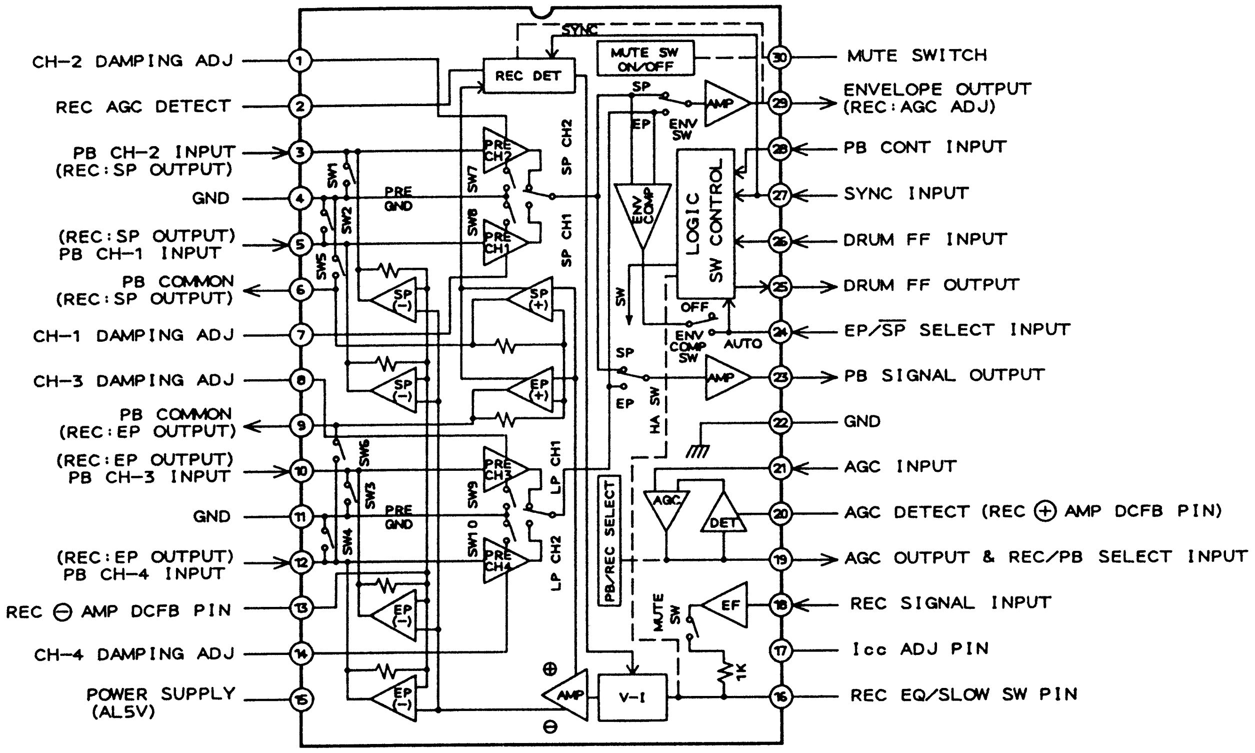
※ THIS SCHEMATIC DIAGRAM IS ONLY FOR REFERENCE.
TO AVOID REPLACING INDIVIDUAL PARTS, REPLACE
THE ENTIRE UNIT ONLY.

NOTE:
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN µF (P=PF)
ALL ELECTROLYTIC CAPACITORS IN µF/WV

RC-W556G, W566E, W576E/G
REMOTE CONTROL UNIT
SCHEMATIC DIAGRAM

No.19-19 V119017M
A2

AN3386NK-A (4 ch REC/HEAD AMP)


CH-2 DAMPING ADJ
REC AGC DETECT
PB CH-2 INPUT (REC : SP OUTPUT)
GND
(REC : SP OUTPUT) PB CH-1 INPUT
PB COMMON (REC : SP OUTPUT)
CH-1 DAMPING ADJ
CH-3 DAMPING ADJ
PB COMMON (REC : EP OUTPUT)
(REC : EP OUTPUT) PB CH-3 INPUT
GND
(REC : EP OUTPUT) PB CH-4 INPUT
REC ⊖ AMP DCFB PIN
CH-4 DAMPING ADJ
POWER SUPPLY (AL5V)
MUTE SWITCH
ENVELOPE OUTPUT (REC : AGC ADJ)
PB CONT INPUT
SYNC INPUT
DRUM FF INPUT
DRUM FF OUTPUT
EP/SP SELECT INPUT
PB SIGNAL OUTPUT
GND
AGC INPUT
AGC DETECT (REC ⊕ AMP DCFB PIN)
AGC OUTPUT & REC/PB SELECT INPUT
REC SIGNAL INPUT
Icc ADJ PIN
REC EQ/SLOW SW PIN
①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑫
⑬
⑭
⑮
⑯
⑰
⑱
⑲
⑳
㉑
㉒
㉓
㉔
㉕
㉖
㉗
㉘
㉙
㉚
SYNC
REC DET
MUTE SW ON/OFF
SP
EP
ENV SW
AMP
PRE CH2
PRE CH1
SP CH2
SP CH1
SW1
SW2
SW5
SW7
SW8
PRE GND
SP (−)
SP (+)
EP (+)
EP (−)
ENV COMP
LOGIC SW CONTROL
SW
OFF
ENV COMP SW
AUTO
HA SW
SW6
SW3
SW4
SW9
SW10
PRE CH3
PRE CH4
LP CH1
LP CH2
PB/REC SELECT
AGC
DET
MUTE SW
EF
1K
V-I
⊕
⊖

LOGIC SW CONDITION

LOGIC INPUT					INTERNAL SWITCH CONDITION							IC OUTPUT	
PB CONT ㉘ PIN	LP/SP SELECT ㉔ PIN		DRUM FF IN ㉖ PIN	SLOW SW ⑯ PIN	SW1 & SW2 SP INPUT SW	SW3 & SW4 LP INPUT SW	HSW1	HSW2	HASW	ENV COMP SWITCH	ENV SW	PRE OUTPUT	DRUM FF OUT ㉕ PIN
HIGH (MANUAL)	HIGH (LP.MANU)		HIGH	OPEN	ON	OFF	CONTROLLED BY DRUM FF IN (㉖ PIN) HIGH:CH-2 LOW:CH-1	CONTROLLED BY DRUM FF IN (㉖ PIN) HIGH:CH-3 LOW:CH-4	LP SIDE	OFF	LP SIDE	CH 3	LOW
			LOW									CH 4	HIGH
	LOW (SP.MANU)		HIGH		OFF	ON			SP SIDE		SP SIDE	CH 2	
			LOW									CH 1	LOW
TYP. (AUTO)	ENV COMP OUTPUT	HIGH /LP1	HIGH			OFF			LP SIDE	AUTO	LP SIDE	CH 3	LOW
			LOW									CH 4	HIGH
		LOW /SP1	HIGH						SP SIDE			CH 2	
			LOW									CH 1	LOW
LOW (STILL & SLOW)	HIGH		HIGH						LP SIDE	OFF		CH 3	LOW
			LOW						SP SIDE			CH 1	
	LOW		HIGH									CH 2	HIGH
			LOW						LP SIDE			CH 4	
	HIGH		HIGH	LOW								CH 3	LOW
			LOW									CH 4	HIGH
	LOW		HIGH						SP SIDE			CH 2	
			LOW									CH 1	LOW

* SW5 ~ SW10 : ALWAYS ON WHEN PB MODE

AN3558FBS (Y/C SIGNAL PROCESSOR)

PIN No.	PORT NAME	I/O	FUNCTION
1	MOD IN	I	REC FM modulator input pin.
2	W/C	–	For white clip level adjustment.
3	MDE OUT	O	Main de-emphasis output pin.
4	MDE PEAK	–	For main de-emphasis peaking control.
5	Vcc (Y)	–	Power supply (for modulator & RF system).
6	REC FM OUT	O	REC FM modulator output pin.
7	DEM GAIN	–	De-modulator gain control pin.
8	PB FM IN	I	PB FM Y signal input pin.
9	ENV DET	–	PB FM Y signal envelope level detect pin.
10	DOP OUT	O	Dropout pulse output pin.
11	EE/PB/TRICK	–	EE/PB/TRICK select pin (H : EE, M : PB, L : PB TRICK).
12	SP/LP/EP	–	SP/LP/EP select pin (H : EP, M : LP, L : SP).
13	C-KILL DET	–	Colour killer detect pin (L : killer ON).
14	NC CTL	–	Noise canceller (NLC/NC) control pin.
15	SLD	–	Side lock detect pin.
16	REC/PB	–	REC/PB select pin (H : PB-ID off, M : PB-ID on, L : REC).
17	BGP OUT	O	Burst gate pulse output pin.
18	ROT	I	Chroma rotary pulse input pin.
19	MODE SEL	–	LNC mode select pin (H : edit, M : NOR2, L : NOR1).
20	MUTE DET	–	Mute detect pin (L : mute, H : non mute).
21	RAD	–	REC APC detect pin.
22	GND(C)	–	Ground (for VCO).
23	AFC/APC	–	REC AFC/PB APC detect pin.
24	fVCO	–	VCO frequency adjustment pin.
25	fVCO(PAL)	–	fVCO select pin (L : PAL ON).
26	X'TAL(PAL)	–	X'tal connect pin for PAL.
27	X'TAL(N/P)	–	X'tal connect pin for NTSC or PAL. (commom pin)
28	X'TAL(NTSC)	–	X'tal connect pin for NTSC.
29	Vcc(C)	–	Power supply for VCO, VXO system.
30	Ref FH DET C	–	Chroma filter auto adjust detect pin.
31	2fsc	O	2fsc output pin.
32	GND(C)	–	Ground for VXO.
33	CACC DET	–	Chroma ACC detect pin.
34	REC C OUT	O	REC chroma signal output pin.
35	FACC DET	–	Field ACC detect pin for CH-2. (OFF when trick mode)
36	ACC DET	–	ACC detect pin.
37	FACC DET	–	Field ACC detect pin for CH-1. (OFF when trick mode)
38	ACC BAL	–	Capacitor connecting pin for ACC balance.
39	3.58/4.43	–	3.58/4.43 select pin (H : 3.58, L : 4.43).
40	VCC(C)	–	Power supply (for main chroma).
41	PB RF C IN	I	PB low chroma signal input pin.
42	CNR TEST	I	CNR monitor and on/off pin (ON : 3.4 V, OFF : 3.8 V).
43	GND(C)	–	Ground for chroma system.
44	TEST2	–	Test pin 2.
45	BMC	–	Capacitor connecting pin for BM balance.
46	TEST1	–	Test pin 1.
47	CACC-C	–	Capacitor connecting pin for chroma ACC balance.
48	COMB DRV	O	Driving output for comb filter.
49	C IN TH	I	Chroma signal input pin (direct in).
50	C IN COMB	I	Chroma signal input pin (through the COMB filter).
51	CNR DL	I	Input from the CNR delay line.
52	MODE SEL	–	Colour mode select pin (H : MESECAM, M : PAL, L : NTSC).
53	PB C OUT	O	PB chroma signal output pin.
54	Y LPF DET	–	Y LPF fsc detect pin.
55	Y/C MIX	I	PB chroma signal input for Y/C mix.
56	VCC(Y)	–	Power supply for Y signal.
57	V.OUT	O	Composite video signal output pin.
58	AVP	I	Quasi V-sync pulse input pin (H : sync level, M : gray level, L : through).
59	SCL DET	–	Sub clamp detect pin.

AN3558FBS (Y/C SIGNAL PROCESSOR)

PIN No.	PORT NAME	I/O	FUNCTION
60	V.IN	I	Video signal input pin.
61	AGC DET	–	AGC level detect pin.
62	SECAM TH	O	SECAM through output pin.
63	EE ADJ	–	EE video level adjustment pin.
64	HSS OUT	O	H sync separator output pin.
65	SYNC DET	–	Sync separator detect pin.
66	SECAM CLP	I	SECAM clamp input pin.
67	Y LPF OUT	O	Y-LPF output pin.
68	CLP 1 IN	I	Clamp 1 input pin.
69	CLP 2 IN	I	Clamp 2 input pin.
70	CCD IN	O	Output for CCD.
71	YNR DEF	O	YNR diffrential component output pin.
72	CORR DET	I	Correlation detect input pin.
73	GND(Y)	–	Ground for Y signal.
74	CCD AGC DET	–	CCD AGC detect pin.
75	NC LPF	–	LPF pin for Noise Canceller.
76	PICT CTL	–	Picture control pin (L:sharp).
77	NLE/MDE	O	Non linear emphasis / main de-emphasis output pin.
78	CLP 3 IN	I	Clamp 3 input pin.
79	ME FBK	I	Main emphasis feedback input pin.
80	ME OUT	O	Main emphasised signal output pin.

AN3317K (REC/HEAD AMP FOR FM AUDIO)

PIN No.	PORT NAME	I/O	FUNCTION
1	H SW SEL	I	CH-1 and CH-2 head amp select switch control. (H : CH-1, L : CH-2)
2	REC/PB SEL	I	REC/PB select pin. (H : REC, L : PB)
3	REC/MUTE SEL	I	REC/MUTE select pin. (H : REC mode, L : mute)
4	CH1 DUB	–	CH-1 head AMP damping control pin.
5	PB CH1 IN	I	CH-1 PB signal input pin.
6	GND1	–	To be grounded.
7	REC OUT	O	REC signal output pin.
8	PB CH2 IN	I	CH-2 PB signal input pin.
9	CH2 DUB	–	CH2 head AMP damping control pin.
10	REC VCC1	O	+4 V power supply for CH-1 head (REC mode).
11	REC VCC2	O	+4 V power supply for CH-2 head (REC mode).
12	MAIN VCC	–	+5 V power supply of this IC.
13	PEAK DET	–	Capacitor connecting pin for Peak AGC detection.
14	AGC DET	–	Capacitor connecting pin for AGC detection.
15	REC CURR	I	Rec current AMP input pin.
16	PB OUT	O	PB signal output pin.
17	GND2	–	To be grounded.
18	REC AGC	O	REC signal out from AGC circuit.
19	REC LPF	–	Capacitor connecting pin for AGC comparator's LPF.
20	CURR EMPH	–	Current emphasis select pin. (H : over REC, L : normal)
21	REC IN	I	REC FM audio signal input pin.
22	AGC LEVEL	–	AGC level control pin.

AN3963NFBPA (Hi-Fi & NORMAL AUDIO SIGNAL PROCESSOR)

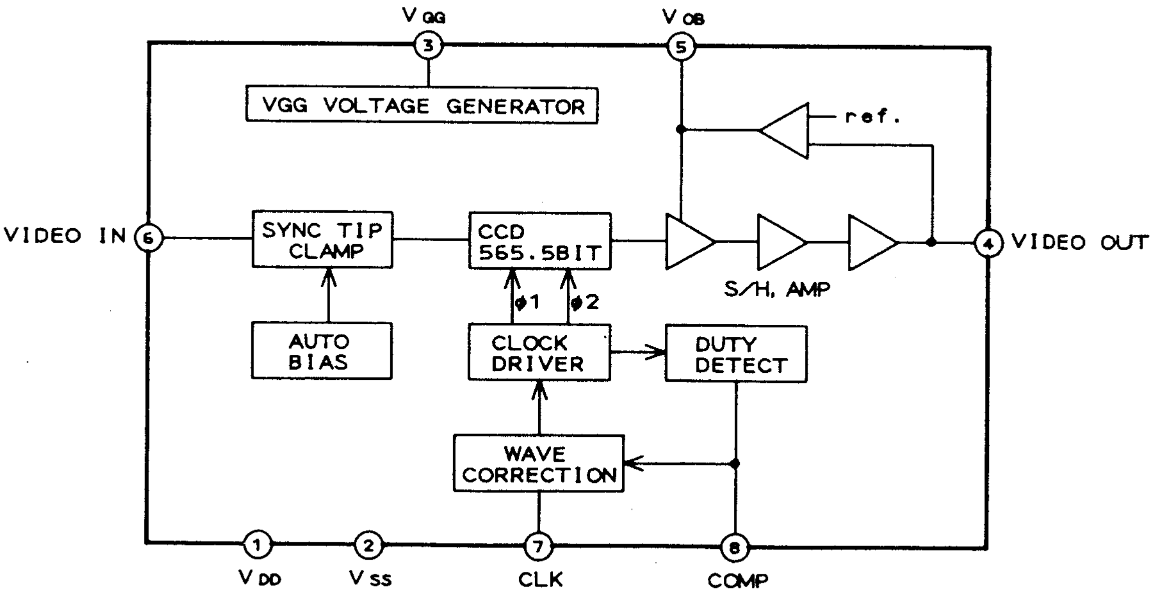
PIN No.	PORT NAME	I/O	FUNCTION
1	VCC2	–	+12 V power supply.
2	TV IN	I	L-CH TV sound input pin.
3	AUX IN	I	L-CH AUX input pin.
4	BS2 IN	I	L-CH BS-2 input pin.
5	BS1 IN	I	L-CH BS-1 input pin.
6	REC VOL	I	L-CH REC input level adjust pin.
7	AGC DET	–	Stereo AGC detection pin.
8	NR DET 1	–	L-CH NR detect 1 pin.
9	NR DET 2	–	L-CH NR detect 2 pin.
10	GND 1	–	L-CH ground pin.
11	NR REF	–	L-CH NR reference pin.
12	CCA OUT	O	L-CH CCA output pin
13	VREF 1	–	A half voltage of the VCC1 (16 pin).
14	EMPHA NF	–	L-CH emphasis/de-emphasis select pin.
15	HOLD C	–	L-CH hold capacitor connecting pin.
16	VCC 1	–	L-CH +5 V power supply.
17	f0 ADJ	I	L-CH f0 (1.4 MHz) adjust pin.
18	FM OUT/BPF MON	O	L-CH REC FM output and BPF monitor pin
19	ENV.DET	O	Envelope detect pin
20	CS IN	I	Chip select signal input pin from SYSCON MI-COM.
21	CLOCK IN	I	Clock input pin from SYSCON MI-COM.
22	DATA IN	O	Data input pin from SYSCON MI-COM.
23	FORCE	O	Hi-Fi PB signal detect pin. (Hi-Fi : H, Normal : L)
24	GND	–	Ground for logic circuit.
25	PB FM IN	I	PB FM signal input pin.
26	VCC	–	+5 V power supply for logic circuit.
27	DELAYD FF	I	Delayed FF input pin
28	GND	–	Ground for BPF.
29	HOLD TIME C	–	Hold time setting pin
30	NOISE DET	–	Noise detection pin
31	FM OUT/BPF MON	O	R-CH REC FM output and BPF monitor pin.
32	f0 ADJ	–	R-CH f0 adjust pin.
33	VCC 1	–	R-CH +5 V power supply.
34	HOLD-C	–	R-CH hold capacitor pin.
35	EMPHA NF	–	R-CH emphasis/de-emphasis select pin.
36	MUTE CTL	–	Muting control pin
37	CCA OUT	O	R-CH CCA output pin.
38	NF REF	–	R-CH NR reference pin.
39	GND 1	–	R-CH ground pin.
40	NR DET 2	–	R-CH NR detect pin 2.
41	NR DET 1	–	R-CH NR detect pin 1.
42	NOR AGC DET	–	Linear audio AGC detection pin.
43	REC IN VOL	I	R-CH REC input level adjust pin.
44	BS 1 IN	I	R-CH BS 1 input pin.
45	BS 2 IN	I	R-CH BS 2 input pin.
46	AUX IN	I	R-CH AUX input pin.
47	TV IN	I	R-CH TV input pin.
48	NOR REC IN	I	Linear audio REC input pin.
49	NOR PB IN	I	Linear audio PB signal input pin (fH trapped).
50	NOR PB OUT	O	Linear audio PB output pin (fH trapped).
51	NOR PB EQ SW	–	Linear audio PB EQ select pin.
52	NOR PB NF	–	Linear audio PB AMP NF pin.
53	NOR PB IN	I	Linear audio PB signal input pin (Normal head).
54	NOR REC NF	–	Linear audio REC AMP EQ pin.
55	NOR REC OUT	O	REC OUT pin for Linear audio (Normal head).
56	GND	–	Ground
57	RF CONV OUT	O	Audio out pin for RF converter.
58	LINE OUT	O	R-CH line out pin.
59	H/P OUT	O	R-CH out for headphone.
60	GND2	–	Ground
61	H/P OUT	O	L-CH out for headphone.
62	LINE OUT	O	L-CH line out pin.
63	VREF 2	–	A half voltage of the VCC2 (1 pin).
64	H/P OUT VOL	–	Headphone AMP level control pin.

NOTE: NR : noise reduction CCA : current controlled amp

LC74760 (CHARACTER GENERATOR)

PIN No	PORT NAME	I/O	FUNCTION
1	Vss	—	Connect the GND
2	XTAL in1	I	14.318 MHz crystal oscillator input
3	XTAL out1	O	14.318 MHz crystal oscillator output
4	H SYNC	O	AFC H sync output
5	XTAL in2	I	17.744 MHz crystal oscillator input
6	XTAL out2	O	17.744 MHz crystal oscillator output
7	V SYNC	O	V. SYNC output
8	$\overline{\text{CS}}$	I	Enable input pin of serial data input
9	SIN	I	Serial data input
10	SCLK	I	Clock input pin for serial data input
11	SECAM	I	SECAM mode select pin (H : SECAM MODE)
12	$\overline{\text{525}}$/625	I	Select pin, 525 or 625 of scanning line
13	$\overline{\text{NTSC}}$/PAL	I	NTSC/PAL SELECT PIN (L : NTSC)
14	$\overline{\text{3.58}}$/4.43	I	3.58MHz or 4.43MHz select input
15	$\overline{\text{RST}}$	I	System reset input
16	CVOUT	O	Composite video signal output
17	VDD2	—	Power supply (+5 V)
18	CVIN	I	Composite video signal input
19	CVCR	I	Chroma signal input for SECAM mode
20	SYNC IN	I	Video signal input of internal sync separator circuit
21	SEPC	—	Adjustment pin of internal sync separator circuit
22	Vss	—	Connect the GND
23	PD OUT	O	AFC control voltage output
24	AM PIN	I	Filter connect pin for AFC circuit
25	AM POUT	O	Filter connect pin for AFC circuit
26	FC	I	AFC control voltage input
27, 28	VCO IN (out)	I/O	Coil and capacitor connecting pin of LC oscillator for VCO.
29	SYNC DET	O	Exclusive NOR logic output of H SYNC AND C SYNC
30	VDD1	—	Digital power supply (+5 V)

LC8992 (CCD 1H DELAY LINE)


V GG
③
V OB
⑤
VGG VOLTAGE GENERATOR
ref.
VIDEO IN ⑥
SYNC TIP CLAMP
CCD 565.5BIT
S/H, AMP
④ VIDEO OUT
ϕ1
ϕ2
AUTO BIAS
CLOCK DRIVER
DUTY DETECT
WAVE CORRECTION
① V DD
② V SS
⑦ CLK
⑧ COMP

M37770M4H-163/165FP (SERVO/SYSCON MI-COM FOR PAL Hi-Fi MODEL)

PIN No.	PORT NAME	I/O	FUNCTION
1,35,84	VCC	–	+5 V power supply.
2	FLY.ES	O	Flying erase OSC control output.
3	Vss	–	To be ground
4	TRP	I	Take up reel pulse input
5	SRP	I	Supply reel pulse input.
6	SEC.MES	O	SECAM & MESECAM select output. (PAL : L)
7,60	NTSC	O	NTSC mode select output. (NTSC : L)
8	C.SYNC	I	Cmposite sync input. (for video judge)
9	SP	O	Tape speed judge output. (except SP : H)
10,50 74,103	VSS	–	Ground.
11	EE	O	EE line control pin.
12	VP	O	Quasi V pulse signal output.
13	INSERT	O	Mute control output for recording section (mute : H)
14	REC.S	O	REC start control output. (real time output)
15	V.SWP	O	Video head switching pulse.
16	PICT	O	Picture quality control output.
17	A.SWP	O	Hi-Fi head switching pulse output
18	A.OSC	O	Linear audio bias OSC on/off control.
20	A.REC.H	O	REC/PB select control output for Hi-Fi audio section. (L : Hi-Fi REC)
21	A.REC/MUTE	O	Rec mute control output for Hi-Fi audio section. (L : mute)
22	Hi-Fi DET	I	Hi-Fi/normal detect input. (Hi-Fi : L)
24	SAT	O	Satellite select control output. (satellite : L)
25	DEC CTL	O	Decoder on/off switching output.
26	WS.J	I	Wide/normal screen judge input.
27	F.E	O	Full track erase OSC control output.
28	WS/NOR	O	Wide screen/normal screen select output. (wide : H)
29	REC SAF	I	REC safety sw input. (L : REC enable)
30	S.PACK	I	S-VHS tape detect switch input. (H : S-VHS tape)
31~34	RSW1~4	I	Input from the rotary (mecha. position detect) switch.
36	SLOW PB	O	Head select switch control when trick mode. (L : normal PB, H : trick mode)
37	PB	O	PB mode control pin.
38	TRQUP	O	Loading motor torque control.
39	LM F	O	Loading motor direction control (forward).
40	LM R	O	Loading motor direction control (reverse).
41	Hi-Fi CS	O	Chip select output for Hi-Fi audio IC
42	Hi-Fi CLK	O	Clock output for Hi-Fi audio IC
43	Hi-Fi DATA	O	Data output for Hi-Fi audio IC
44	NUB	–	To be grounded.
45	NUA	–	To be grounded.
46	RESET	I	Reset input.
47	X IN	I	X'tal osc input (f=16 MHz).
48	X OUT	O	X'tal osc output (f=16 MHz).
49	CLK SEL	I	Clock select input. (L : requires sub clock)
51	XC IN	I	X'tal osc input (f=32.768 kHz).
52	XC OUT	O	X'tal osc output (f=32.768 kHz).
53	INT/EXT	O	Input select control output.
54	AV1/AV2	O	AV1/AV2 external input selection control output. (L : AV1)
55	TV/VCR	O	TV/VIDEO select control output. (L : TV, H : VIDEO)
56	I^2 C SDA	I/O	I^2 C bus serial data in/out.
57	I^2 C SCL	O	I^2 C bus serial clock in/out.
58	A.MUTE	O	Audio mute control. (H : mute)
59	T.MUTE	O	Tuner mute control. (H : mute)
61	FINE/NOR	O	Fine/normal tuning select control output
62	AFT-L	I	AFT low level judge input.
63	AFT-H	I	AFT high level judge input.
64	AFT	O	AFT on/off control output. (L : AFT on)
67	V.SYNC OUT	O	V sync negative output.
68	BAND B	O	Tuner band select output.

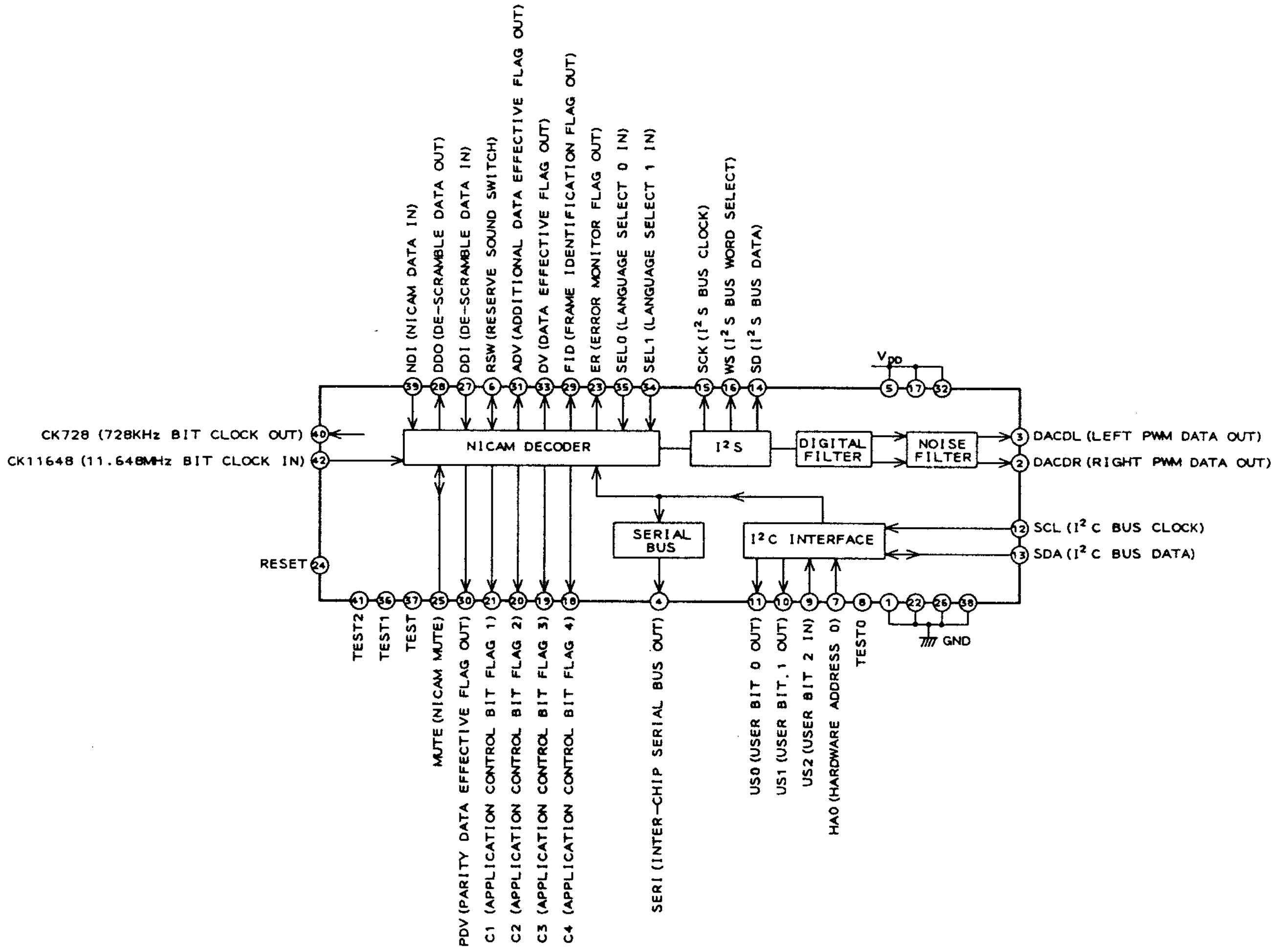
M37770M4H-163/165FP (SERVO/SYSCON MI-COM FOR PAL Hi-Fi MODEL)

PIN No.	PORT NAME	I/O	FUNCTION
69	BAND A	O	Tuner band select output.
70	$\overline{\text{HS}}$	O	Capstan motor high speed control. (FF & RWD : L)
71	$\overline{\text{F}}$/R	O	Capstan motor direction control. (H : reverse)
72	$\overline{\text{CTL GAIN}}$	O	CTL signal level control output. (FF & RWD : "L")
73	CM STOP	O	Capstan motor stop control. (H : motor stop)
75	TU POWER	O	Tuner power supply on/off control. (H : on)
76	$\overline{\text{SEN POW}}$	O	End & start sensor's power supply control.
77	AL	O	AL power supply line control output.
78	CTL RET	O	PB CTL reset control out
79	SYS SO	O	Serial data out to OPE MI-COM.
80	SYS SI	I	Serial data in from OPE MI-COM.
81	SYS CLK	I	Serial clock input from OPE MI-COM.
82	SYS RDY	O	Data transfer ready output to OPE MI-COM.
83	$\overline{\text{SHORT}}$	I	Power supply abnormal condition detect input. (L : REG voltage is too high.)
85	AMP VCC	–	+5 V power supply for analog AMP.
86	AMP VREF	–	Voltage reference for analog AMP.
87	CLAMPR	I	CTL clamp AMP negative input.
88	CLAMPF	I	CTL clamp AMP positive input.
89	AMPC	–	Load capacitor connecting pin for CTL AMP.
90	CTLAMP OUT	O	CTL AMP output.
91	CTLAMP IN	I	CTL AMP input.
92	CTL+SWOUT	O	CTL internal sw control.
93	CTL+	I	CTL positive side input.
94	CTL-	I	CTL negative side input.
95	C	–	Capacitor connecting pin for REC CTL signal's trapezoid wave.
96	CP FG	I	Capstan motor FG signal input.
97	DM FG	I	Drum motor FG signal input.
98	DM PG	I	Drum motor PG signal input.
99	AMP VSS	–	Ground for analog system (FG, PG & CTL AMP).
100	A.VCC	–	+5 V power supply (for analogue system circuit).
102	VREF	–	Servo voltage reference.
104	FINE VT	O	Fine tuning voltage output. (D/A out)
105	V.REC,VOL 2	O	CH-2 video head REC current control output. (D/A)
106	V.REC,VOL 1	O	CH-1 video head REC current control output. (D/A)
107	ANC.VOL	O	Noise cancel value output. (D/A)
108	Hi-Fi ENV	I	Hi-Fi envelope detect signal input for auto tracking
109	LNC	O	Line noise canceller control (L/M/H).
111	E/P/T	O	EE/PB/TRICK mode select control (L/M/H).
112	ES	I	End sensor input.
113	INSERT H	O	CTL head control when insert mode.
115	SDP	I	SECAM (MESECAM) detect signal input. (PAL : L)
116	SS	I	Start sensor input.
117	CT DET	I	Cross talk detection voltage input for auto tracking.
118	TUNE	O	Tuning output for I-HQ system (L,M & H).
119	ENV.DET	I	Video envelope detect input.
120	V.SYNC IN	I	V.SYNC input.
121	HEAD CTL	O	Video head select control output when trick mode.
122	$\overline{\text{NP}}$	O	Color system convert control out (NTSC to PAL : L)
123	C.FG MON	O	Amplified CM FG signal out for monitoring.
124	D.FG MON	O	Amplified CM FG signal out for monitoring.
125	CTL MON	–	Amplified CTL signal out for monitoring.
126	TUNER PWM	O	Tuning voltage output for tuner.
127	CM PWM	O	Speed & phase error output for capstan motor.
128	DM PWM	O	Speed & phase error output for capstan motor.

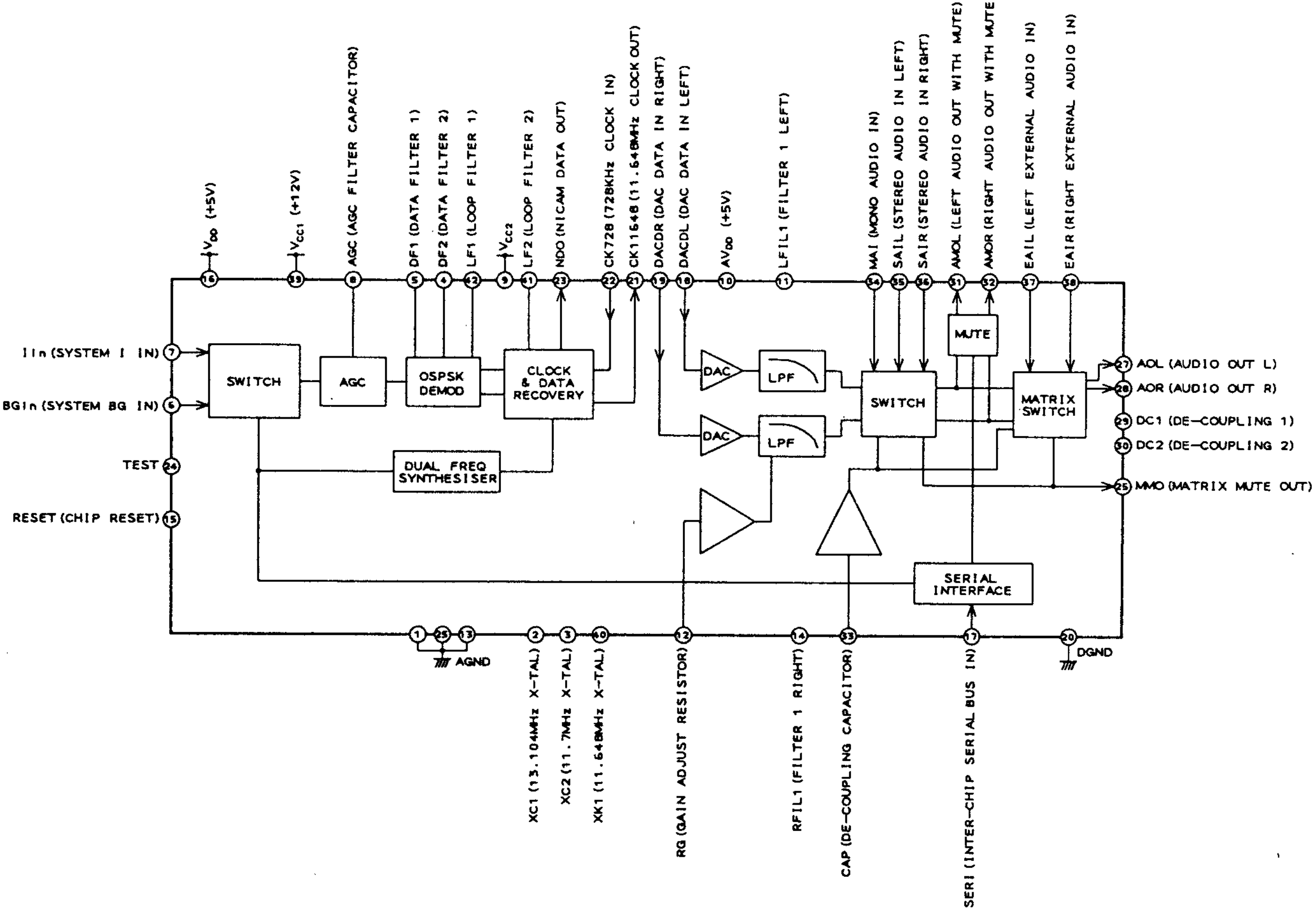
SAA5233 (VPS DATA DECODER)

PIN No.	PORT NAME	I/O	FUNCTION
1	MOD IN	I	REC FM modulator input pin.
2	BLACK	–	Video black level storage pin connected to ground via a 0.1 µF capacitor.
3	IREF	I	Reference current input pin.
4	VDD	–	+5 V power supply.
5	Vss	–	Ground.
6	OSCOUT	O	27 MHz crystal oscillator output.
7	OSCIN	I	27 MHz crystal oscillator input.
8	OSCGND	–	27 MHz crystal oscillator ground.
9	TEST S	–	Ground in normal operation.
10	TEST A	–	Ground in normal operation.
11	TP1	–	Ground in normal operation.
12	SCL	I	Serial clock input for I^2 C control bus.
13	SDA	I/O	Serial data port for I^2 C control bus.
14	AO	–	Least significant bit of I^2 C address.
15	INT	O	Open drain interrupt output. (Active low)
16	TP2	–	Ground in normal operation.

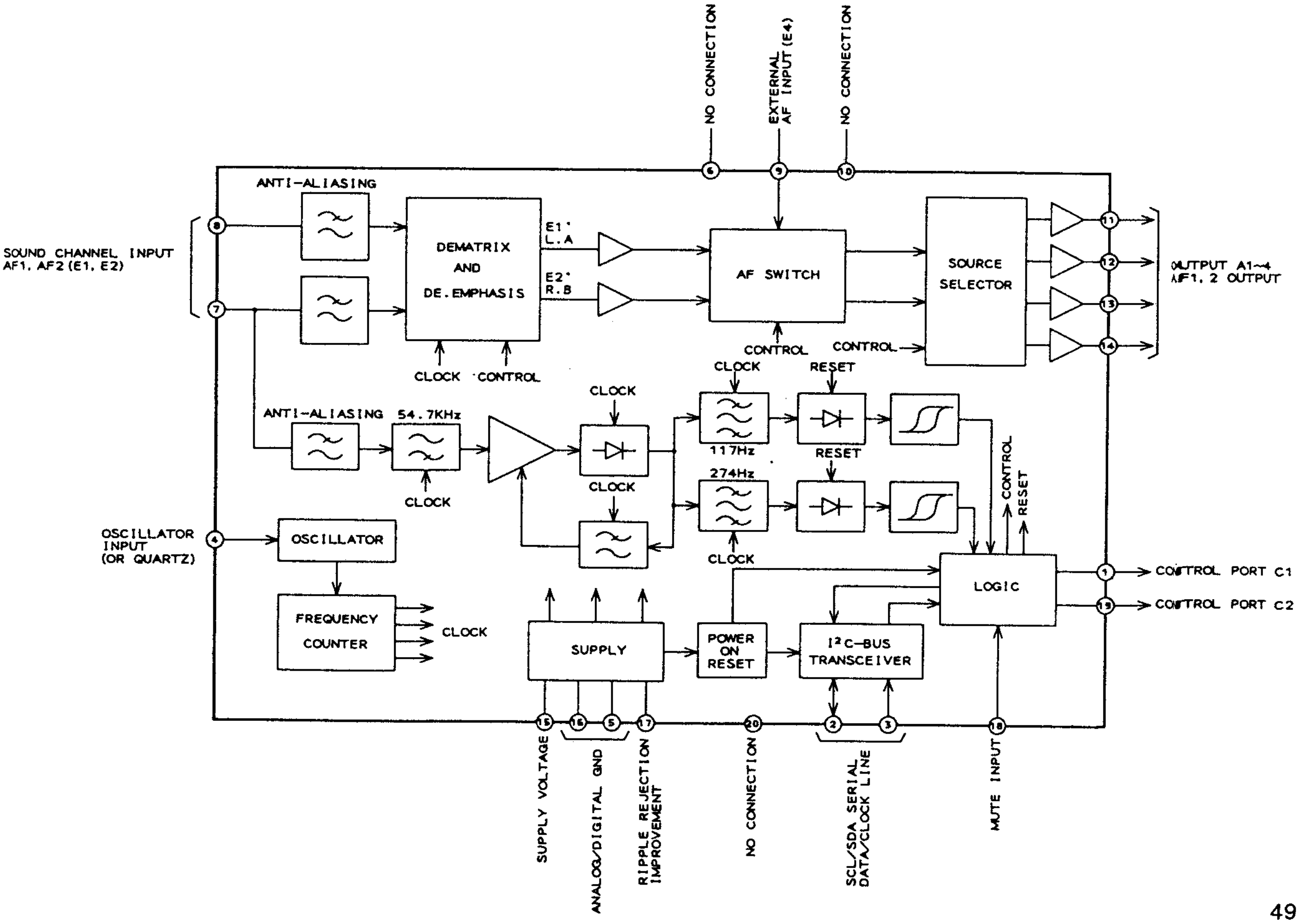
TDA8204 (NICAM DECODER)


NDI (NICAM DATA IN) 39
DDO (DE-SCRAMBLE DATA OUT) 28
DDI (DE-SCRAMBLE DATA IN) 27
RSW (RESERVE SOUND SWITCH) 6
ADV (ADDITIONAL DATA EFFECTIVE FLAG OUT) 31
DV (DATA EFFECTIVE FLAG OUT) 33
FID (FRAME IDENTIFICATION FLAG OUT) 29
ER (ERROR MONITOR FLAG OUT) 23
SEL0 (LANGUAGE SELECT 0 IN) 35
SEL1 (LANGUAGE SELECT 1 IN) 34
SCK (I^2 S BUS CLOCK) 15
WS (I^2 S BUS WORD SELECT) 16
SD (I^2 S BUS DATA) 14
V_{DD} 5 17 32
CK728 (728KHz BIT CLOCK OUT) 40
CK11648 (11.648MHz BIT CLOCK IN) 42
NICAM DECODER
I^2 S
DIGITAL FILTER
NOISE FILTER
3 DACDL (LEFT PWM DATA OUT)
2 DACDR (RIGHT PWM DATA OUT)
SERIAL BUS
I^2 C INTERFACE
12 SCL (I^2 C BUS CLOCK)
13 SDA (I^2 C BUS DATA)
RESET 24
41 TEST2
36 TEST1
37 TEST
25 MUTE (NICAM MUTE)
30 PDV (PARITY DATA EFFECTIVE FLAG OUT)
21 C1 (APPLICATION CONTROL BIT FLAG 1)
20 C2 (APPLICATION CONTROL BIT FLAG 2)
19 C3 (APPLICATION CONTROL BIT FLAG 3)
18 C4 (APPLICATION CONTROL BIT FLAG 4)
4 SERI (INTER-CHIP SERIAL BUS OUT)
11 US0 (USER BIT 0 OUT)
10 US1 (USER BIT 1 OUT)
9 US2 (USER BIT 2 IN)
7 HA0 (HARDWARE ADDRESS 0)
8 TEST0
1 22 26 38 GND

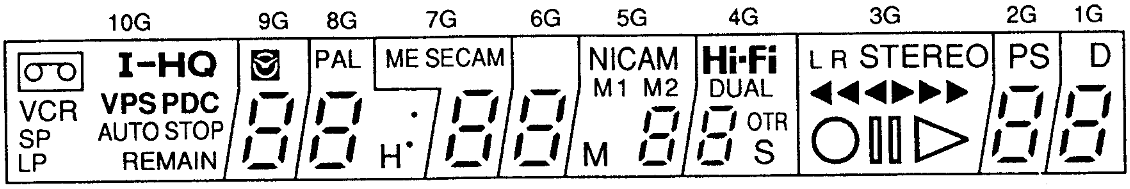
TDA8205 (QPSK DEMODULATOR)

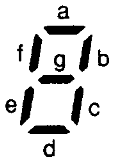

VDD (+5V) 16
VCC1 (+12V) 39
AGC (AGC FILTER CAPACITOR) 8
DF1 (DATA FILTER 1) 5
DF2 (DATA FILTER 2) 4
LF1 (LOOP FILTER 1) 42
VCC2 9
LF2 (LOOP FILTER 2) 41
NDO (NICAM DATA OUT) 23
CK728 (728KHz CLOCK IN) 22
CK11648 (11.648MHz CLOCK OUT) 21
DACDR (DAC DATA IN RIGHT) 19
DACDL (DAC DATA IN LEFT) 18
AVDD (+5V) 10
LFIL1 (FILTER 1 LEFT) 11
MAI (MONO AUDIO IN) 34
SAIL (STEREO AUDIO IN LEFT) 35
SAIR (STEREO AUDIO IN RIGHT) 36
AMOL (LEFT AUDIO OUT WITH MUTE) 31
AMOR (RIGHT AUDIO OUT WITH MUTE) 32
EAIL (LEFT EXTERNAL AUDIO IN) 37
EAIR (RIGHT EXTERNAL AUDIO IN) 38
IIn (SYSTEM I IN) 7
BGIn (SYSTEM BG IN) 6
TEST 24
RESET (CHIP RESET) 15
SWITCH
AGC
OSPSK DEMOD
CLOCK & DATA RECOVERY
DUAL FREQ SYNTHESISER
DAC
LPF
DAC
LPF
SWITCH
MUTE
MATRIX SWITCH
SERIAL INTERFACE
27 AOL (AUDIO OUT L)
28 AOR (AUDIO OUT R)
29 DC1 (DE-COUPLING 1)
30 DC2 (DE-COUPLING 2)
25 MMO (MATRIX MUTE OUT)
1 25 13 AGND
2 XC1 (13.104MHz X-TAL)
3 XC2 (11.7MHz X-TAL)
40 XK1 (11.648MHz X-TAL)
12 RG (GAIN ADJUST RESISTOR)
14 RFIL1 (FILTER 1 RIGHT)
33 CAP (DE-COUPLING CAPACITOR)
17 SERI (INTER-CHIP SERIAL BUS IN)
20 DGND

TDA8417 (MULTIPLXED DECODER)


NO CONNECTION 6
EXTERNAL AF INPUT (E4) 9
NO CONNECTION 10
SOUND CHANNEL INPUT AF1, AF2 (E1, E2) 8 7
ANTI-ALIASING
DEMATRIX AND DE.EMPHASIS
E1' L.A
E2' R.B
CLOCK
CONTROL
AF SWITCH
CONTROL
CONTROL
SOURCE SELECTOR
11 12 13 14
OUTPUT A1~4 AF1, 2 OUTPUT
ANTI-ALIASING 54.7KHz
CLOCK
CLOCK
CLOCK
117Hz
RESET
274Hz
RESET
CLOCK
CLOCK
CONTROL
RESET
OSCILLATOR INPUT (OR QUARTZ) 4
OSCILLATOR
FREQUENCY COUNTER
CLOCK
SUPPLY
POWER ON RESET
I²C-BUS TRANSCEIVER
LOGIC
1 CONTROL PORT C1
19 CONTROL PORT C2
15 SUPPLY VOLTAGE
16 5 ANALOG/DIGITAL GND
17 RIPPLE REJECTION IMPROVEMENT
20 NO CONNECTION
2 3 SCL/SDA SERIAL DATA/CLOCK LINE
18 MUTE INPUT

FLD FIP10CCM7


10G
9G
8G
7G
6G
5G
4G
3G
2G
1G
VCR
SP
LP
I-HQ
VPS PDC
AUTO STOP
REMAIN
PAL
ME SECAM
H
NICAM
M1 M2
M
Hi·Fi
DUAL
OTR
S
L R STEREO
PS
D



Internal connection

	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
S1	STOP	a	a	a	a	a	a	▶▶▷	a	a
S2	AUTO	b	b	b	b	b	b	◁◀◀	b	b
S3	VCR	c	c	c	c	c	c	▒▯	c	c
S4	SP	d	d	d	d	d	d	○	d	d
S5	LP	e	e	e	e	e	e	▯▒	e	e
S6	REMAIN	f	f	f	f	f	f	◀◁◁	f	f
S7	▭	g	g	g	g	g	g	▷	g	g
S8	**VPS**	⏲	H			M	S	▷▷▶	PS	D
S9	**PDC**		•	SECAM		M2	OTR	STEREO		
S10	**I-HQ**		•	ME		M1	DUAL	R		
S11			PAL			NICAM	**Hi·Fi**	L		